






MIT CSAIL Alliances

STUDENT & POSTDOCTORAL FELLOWS

2024-2025

Foreward

The CSAIL Alliances Student and Postdoctoral Profile Book includes brief profiles of students, postdocs, researchers, and select recent alumni at the MIT Computer Science and Artificial Intelligence Laboratory (CSAIL). This book, compiled by CSAIL Alliances, is designed to introduce CSAIL students and postdocs to our program members and to help forge valuable new connections.

MIT CSAIL has approximately 1,200 PhD and graduate students, with 119 postdoctoral associates and fellows. This book represents a self-selected group of students (submitting a profile is voluntary) who are interested in exploring opportunities in industry - whether for internships, co-ops, part-time, or full-time positions. Select recent alumni are included that may be open to positions requiring some work experience.

We hope this profile book proves beneficial to our students and to our CSAIL Alliances members.

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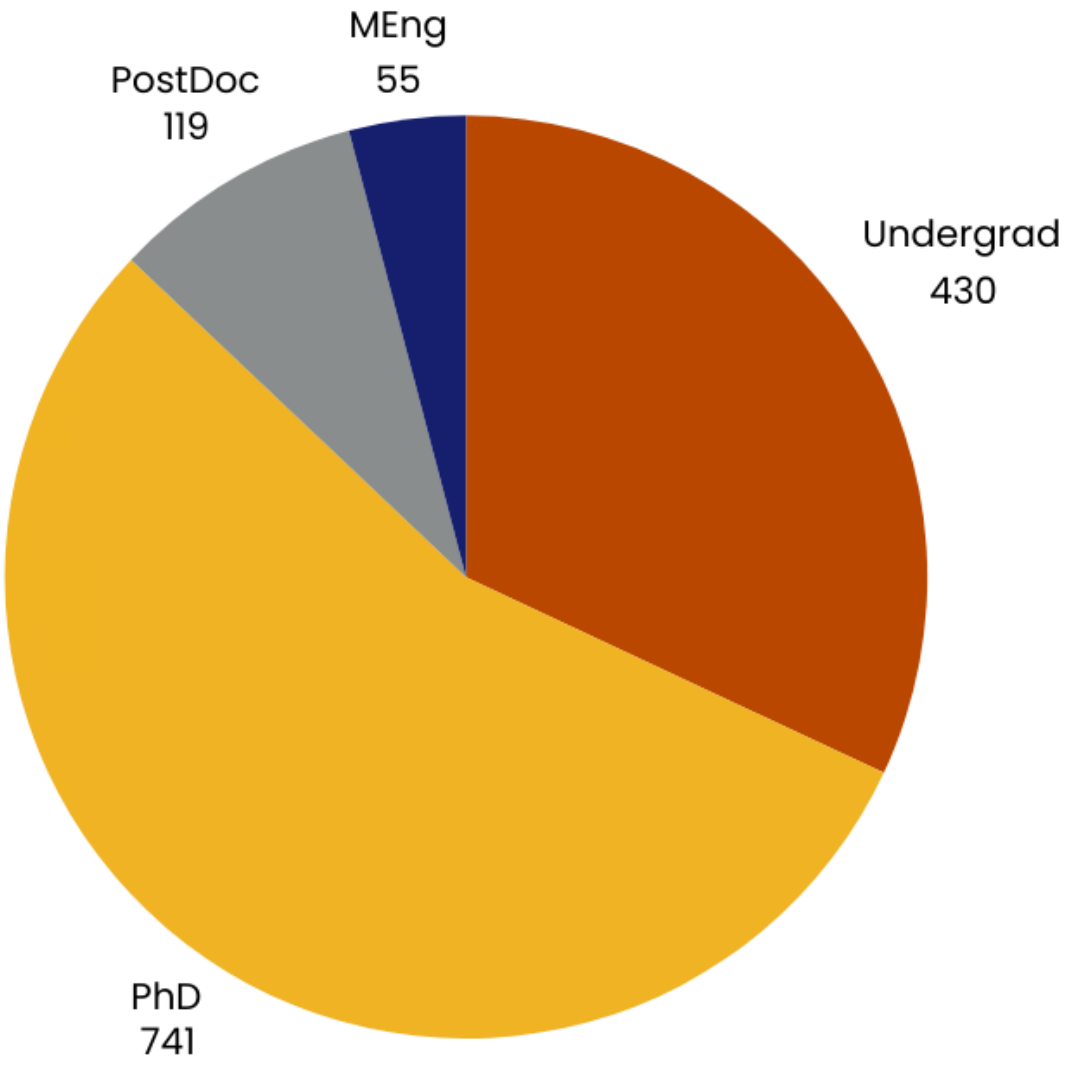
Student Data

Students at CSAIL (2024-2025)

CSAIL students include PhD, Master of Engineering, and some undergraduates associated with the lab.

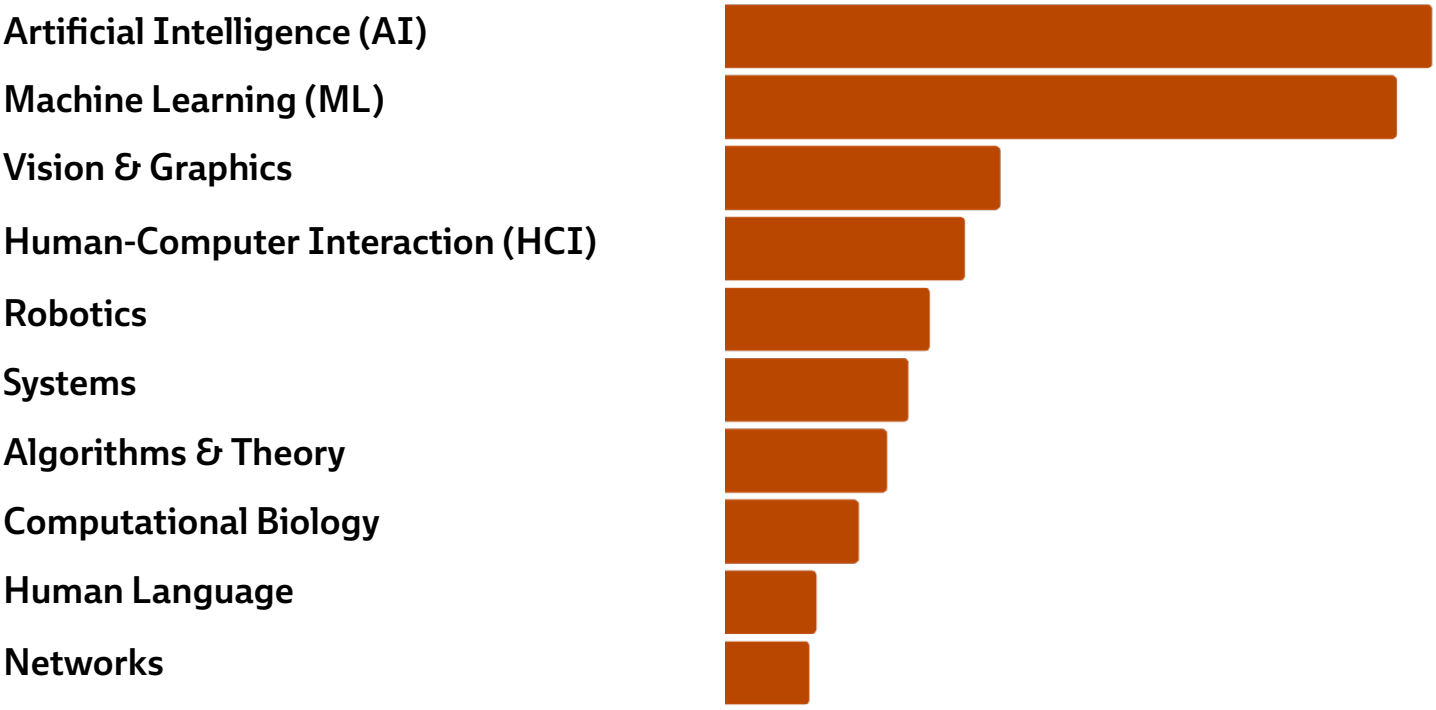


CSAIL is home to over **1,700 people, 900+ active projects, 60 research groups, and approximately 1,200 PhD and graduate students**. The work in the lab spans virtually every discipline within computer science and artificial intelligence. Internally, researchers from the various disciplines align along Communities of Research (CoRs). **CoRs include**: Applied Machine Learning (ML), Cognitive AI, Computing & Society, Embodied Intelligence, Human-Computer Interaction (HCI), Systems, Vertical AI, Visual Computing, and Theory of Computation.

Student Data

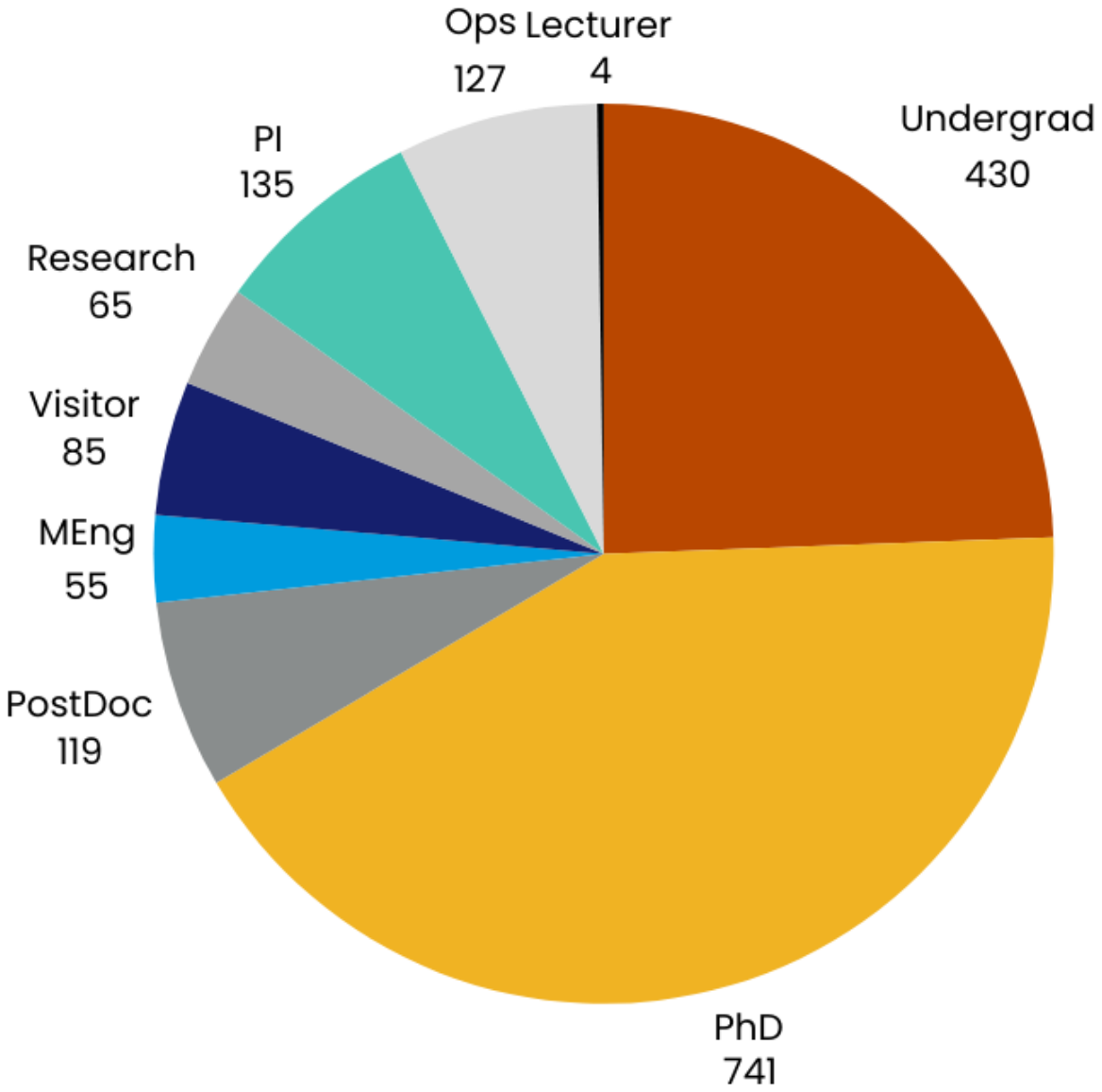
Areas of Research (2024-2025)

Research category data/participation reflects personnel in the 2024 Student & PostDoctoral Fellows Profile Book



Student Data

CSAIL Community (2024-2025)



MIT Computer Science and Artificial Intelligence Laboratory (CSAIL)
Ray and Maria Stata Center
32 Vassar Street
Cambridge, MA 02139, USA

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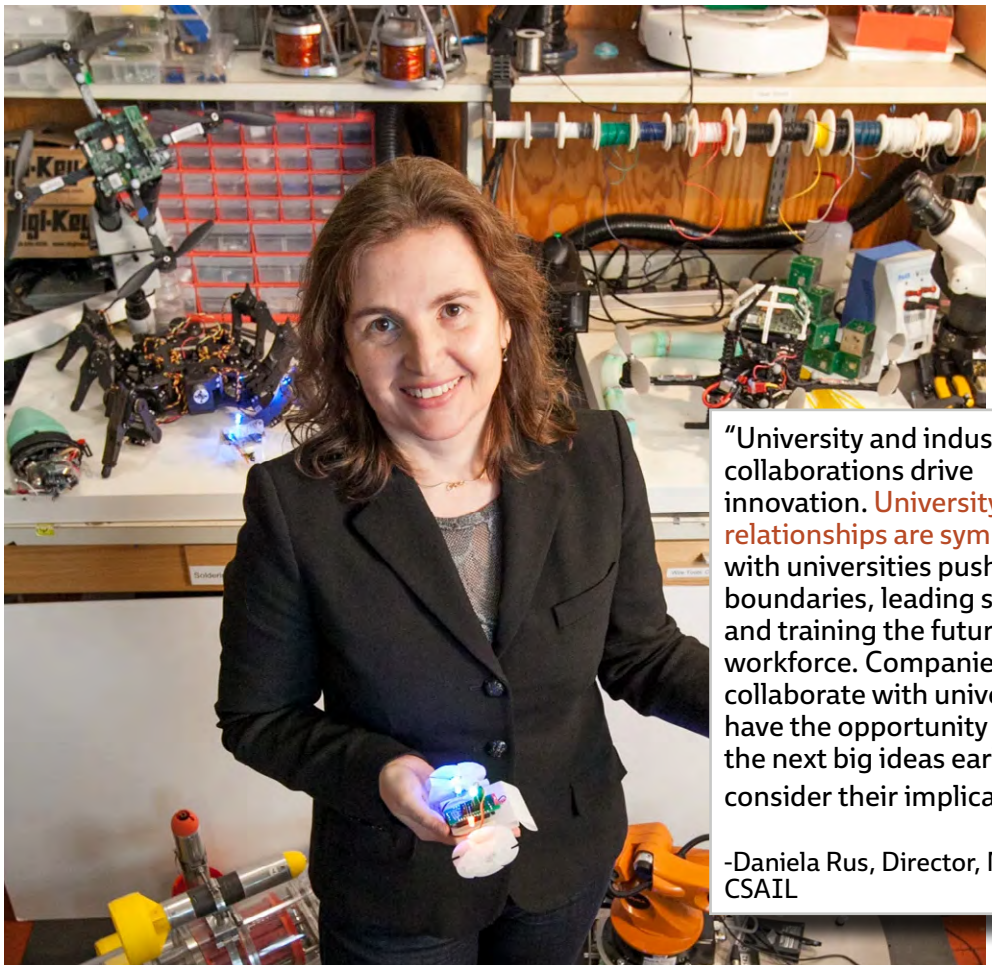

"University and industry collaborations drive innovation. University-industry relationships are symbiotic, with universities pushing the boundaries, leading science, and training the future workforce. Companies who collaborate with universities have the opportunity to see the next big ideas early and consider their implications."

-Daniela Rus, Director, MIT CSAIL

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Research Category

Entrance to CSAIL Alliances from the Gates elevator lobby.

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Index by Communities of Research

MIT Computer Science and Artificial Intelligence Laboratory (CSAIL)
Ray and Maria Stata Center
32 Vassar Street
Cambridge, MA 02139, USA

cap.csail.mit.edu | alliances@csail.mit.edu

MIT CSAIL Alliances

Primary CSAIL Advisor:
Daniela Rus

Degree/Role:
Postdoctorate

Graduation Date:
December 2024

Job Type:
Full Time Position

Erfan Aasi

Contact Email: eaasi@mit.edu

- **Research Category**:AI;Machine Learning;Robotics
- **Research Area (specific)**: Generative AI for Autonomous Vehicles
- **Research Group**:Distributed Robotics Lab (DRL)
- **Primary Community of Research (CoR) at CSAIL**: Applied Machine Learning

Short Bio: Efran Aasi is a postdoctoral associate at MIT, working with Professor Daniela Rus. His research focuses on integrating generative models, especially large language models, into decision-making, motion planning, and control algorithms for autonomous systems. He earned both a Master's and PhD in Mechanical Engineering from Boston University, where he was supervised by Professor Calin Belta. His PhD thesis centered on the inference and synthesis of temporal logic properties for autonomous systems. Efran completed a B.Sc. in Electrical Engineering at Sharif University of Technology in Tehran, Iran.

Description of Research/Thesis Topic: Application of Large Language Models for Autonomous Systems

Additional Information:

- **Website**

Primary CSAIL Advisor:
Leslie Kaelbling

Additional Advisor(s):
Tomas Lozano-Perez

Degree/Role:
PhD

Graduation Date:
September 2027

Job Type:
Summer Internship

Aditya Agarwal

Contact Email: adityaag@mit.edu

- **Research Category**: AI;Machine Learning;Robotics;Vision & Graphics
- **Research Area (specific)**: 3D generative modeling, image & video generative models, robotics (manipulation and reinforcement-learning)
- **Research Group**: Learning and Intelligent Systems Group
- **Primary Community of Research (CoR) at CSAIL**: Embodied Intelligence

Short Bio: Aditya is a PhD student in the Learning and Intelligent Systems Group, under the mentorship of Prof. Leslie Kaelbling and Prof. Tomas Lozano-Perez. His research lies at the intersection of AI, generative modeling, and robotics. Aditya earned a Master's degree by Research in Computer Science from IIIT Hyderabad, India, with a specialization in computer vision and robotics. Alongside his academic pursuits, he gained significant industrial experience at Microsoft, where he worked as a research engineer on the Bing search engine. During his tenure, he designed and developed production-grade systems at scale, serving over 100 million users globally, and mentored interns and new hires. Aditya holds a Bachelor's degree in Computer Science from PES University, India, and has interned at Microsoft Research, Mila Quebec, and the University of Calgary, Canada.

Description of Research/Thesis Topic: Aditya is focused on developing the intelligence behind general-purpose mobile manipulation robots capable of autonomous operation. His work involves developing generative models to create geometrically and semantically meaningful 3D scene representations for robotic systems. Additionally, he explores the development of generalizable robot learning policies by combining generative models, such as video representation models and VLMs, with reinforcement learning and simulation. Ultimately, Aditya is driven by the vision of combining holistic 3D scene representations with robot policy learning methods to build versatile robots capable of performing a wide range of tasks for humans.

Additional Information:

- **Website**
- **Resume**

Primary CSAIL Advisor:
Charles E. Leiserson

Additional Advisor(s):
Tao B. Schardl

Degree/Role:
Master's

Graduation Date:
December 2024

Job Type:
Full Time Position

Sabiyyah Ali

Contact Email: sabi@mit.edu

- **Research Category**: AI;Algorithms;Machine Learning;Performance Engineering;Systems
- **Research Area (specific)**: Improvements to the Opencilk compiler and runtime system
- **Research Group**:SuperTech
- **Primary Community of Research (CoR) at CSAIL**: Systems

Short Bio: Sabiyyah is an MEng student in the SuperTech group. Her research broadly focuses on building systems to improve the performance and scalability of parallel and distributed applications. She is also a Work of the Future Fellow at MIT IPC, focusing on LLMs. Outside of research, she enjoys movies, hiking, and mahjong.

Description of Research/Thesis Topic: Her MEng thesis revolves around enabling parallel computation for PyTorch using the OpenCilk Compiler. She is also working on implementing a lock-free work-stealing scheduler for the Opencilk Runtime System.

Additional Information:
- **Website**
- **Resume**

Primary CSAIL Advisor:
Marzyeh Ghassemi

Degree/Role:
PhD

Graduation Date:
May 2027

Job Type:
Summer Internship

Kumail Alhamoud

Contact Email: kumail@csail.mit.edu

- **Research Category**: Machine Learning;Vision & Graphics; Healthcare
- **Research Area (specific)**: Machine Learning for Healthcare
- **Research Group**: Healthy ML
- **Primary Community of Research (CoR) at CSAIL**: Vertical AI

Short Bio: Kumail is pursuing his PhD at MIT CSAIL. He is supported by the Jameel Clinic Fellowship. His primary focus lies in developing trustworthy and adaptable machine learning systems. Before MIT, he completed his BS at Cornell University, and his MS at King Abdullah University of Science and Technology (KAUST). During his MS, he conducted computer vision research with Professor Bernard Ghanem. His MS research projects, focused on continual learning, robustness, and domain generalization, were published in top ML conferences and journals, including CVPR and TMLR.

Description of Research/Thesis Topic: Kumail is actively exploring methods to evaluate models under distribution shifts, especially those encountered in real-world healthcare applications. Such shifts can arise from disease evolution, such as the emergence of new pathogens, the introduction of novel imaging acquisition devices, or changing patient subpopulations. A significant challenge is the scarcity of high-quality, large-scale healthcare data essential for training deep learning models. Recently, Kumail has focused on developing continuously adaptable models that leverage multimodal data, ensuring accurate predictions across varied distributions.

Additional Information:
- **Website**
- **Resume**

Primary CSAIL Advisor:
William Freeman

Degree/Role:
Master's

Graduation Date:
Febuary 2025

Job Type:
Full Time Position

Shaden Alshammari

Contact Email: shaden@mit.edu

- **Research Category**: AI;Machine Learning;Vision & Graphics
- **Research Area (specific)**: Representation Learning, Long-Tailed Recognition, Vision-Language Models
- **Research Group**:Visual Computing

Short Bio: Shaden is a Master's student in Computer Science and Engineering at MIT, focusing on machine learning research at CSAIL with Bill Freeman. Before pursuing her Master's, she earned a Bachelor's degree in Mathematics and Computer Science from MIT, contributed to various research projects at the Argo AI Lab for Self-Driving Cars and the CMU Robotics Institute, and was a Math Olympiad medalist. She enjoys employing mathematical approaches to solve machine learning challenges.

Description of Research/Thesis Topic: Her thesis introduces a unified framework that reinterprets leading learning methods, offering new strategies to improve performance in representation learning. Additionally, she is working on enhancing negation comprehension in vision-language models (VLMs). In previous research, she developed a weight-balancing method to address learning challenges in imbalanced datasets, which gained recognition in the long-tailed recognition community. She has also worked on adapting contact microphones for audio-visual representations in robotics.

Additional Information:

- **Resume**

Primary CSAIL Advisor:
Constantinos Daskalakis

Degree/Role:
Master's

Graduation Date:
Febuary 2025

Job Type:
Full Time Position

Angelos Assos

Contact Email: assos@mit.edu

- **Research Category**: Algorithms;Machine Learning
- **Research Area (specific)**: Algorithmic Game Theory, Statistics
- **Primary Community of Research (CoR) at CSAIL**: Theory of Computation

Short Bio: Angelos is currently an MEng student at MIT. Prior to that he completed his undergraduate degree also from MIT, majoring in Computer Science and Engineering and concentrating in Economics.

Description of Research/Thesis Topic: Angelos' research lies in the intersection of Complexity Theory, Game Theory and Control theory. His current work is centered around examining how strategic agents can trick famous learning algorithms in online learning environments (such as games) in order to maximize their utility.

Additional Information:

- **Website**

Primary CSAIL Advisor:
Nir Shavit

Degree/Role:
Postdoctorate

Graduation Date:
January 2026

Job Type:
Summer Internship

Thomas Athey

Contact Email: tathey_1@mit.edu

- **Research Category**: AI;Computational Biology;Machine Learning;Vision & Graphics
- **Research Area (specific)**: Biological image analysis, connectomics
- **Primary Community of Research (CoR) at CSAIL**: Applied Machine Learning

Short Bio: Thomas Athey is an MIT-Novo Nordisk Artificial Intelligence Postdoctoral Fellow whose work focuses on novel machine learning (ML) approaches for processing and analyzing image data. In his doctoral work, Thomas developed an approach for computationally tracing entangled neurons in whole-brain images which outperformed state of the art methods. He also studied numerical properties of representing neuron traces as splines. His present research has brought him to two other imaging settings. The first is electron microscopy, where Thomas is part of a team working to build a microscope that uses machine learning to guide image acquisition, accelerating overall imaging time. This project has the potential to greatly expand the scale of connectomics, the field concerned with mapping connections in the brain. Thomas is also working on image segmentation and generative modeling of neuronal cell culture images. Specifically, he is working with collaborators to identify cellular subtypes of amyotrophic lateral sclerosis (ALS) in human motoneuron cell lines. He is working to develop more comprehensive analysis tools of high-throughput cell culture imaging for impact in biological and pharmacological research.

Description of Research/Thesis Topic: Computer vision for neuroscience image analysis

Additional Information:
- **Website**
- **Resume**

Primary CSAIL Advisor:
Kaiming He

Degree/Role:
PhD

Graduation Date:
May 2029

Job Type:
Summer Internship

Jake Austin

Contact Email: j_austin@mit.edu

- **Research Category**: AI;Machine Learning;Vision & Graphics
- **Research Area (specific)**: 3D Vision
- **Primary Community of Research (CoR) at CSAIL**: Visual Computing

Short Bio: Jake is a Ph.D. student in EECS, working with Prof. Kaiming He on unsupervised learning and 3D vision. Jake completed his B.S. / M.S. in Computer Science at UC Berkeley in 2024, where he worked on 3D vision under Prof. Angjoo Kanazawa. He is one of the authors of Nerfstudio, an open source nerfs library with over 9k GitHub stars, and has interned at companies like Tesla, where he worked on scene reconstruction and park assist.

Description of Research/Thesis Topic: Jake's current research is at the intersection of 3D vision and unsupervised learning. His past work has been in monocular reconstruction for static and dynamic scenes, working on both stronger 3D priors for reconstruction and frameworks for 3D vision. His current and continuing interest is in extracting 3D information from 2D foundation models, and training 2D foundation models to have greater 3D consistency without requiring 3D data.

Additional Information:
- **Resume**

Primary CSAIL Advisor:
Kaiming He

Degree/Role:
PhD

Graduation Date:
July 2029

Job Type:
Summer Internship

Xingjian Bai

Contact Email: xbai@mit.edu

- **Research Category**: AI;Algorithms;Machine Learning;Vision & Graphics
- **Research Area (specific)**: Generative Models, Representation Learning
- **Research Group:** Embodied AI
- **Primary Community of Research (CoR) at CSAIL**: Embodied Intelligence

Short Bio: Xingjjan is a first-year Ph.D. student at MIT. He received his master's and bachelor's degree in Mathematics and Computer Science from the University of Oxford.

Description of Research/Thesis Topic: Xingjian's research has focused on the intersection of classic algorithms and deep learning, covering topics such as learning-augmented algorithms and new architectures of diffusion models. He is broadly driven by research that is scientifically impactful and intellectually stimulating.

Additional Information:

- **Website**
- **Resume**

CSAIL Alliances is the department within the lab that connects organizations to CSAIL through a variety of engagement programs. If your organization wants to leverage technology, connect with top talent, engage disruptive new startups, or collaborate on innovative research areas, connecting with CSAIL will help you stay ahead of the curve.

Primary CSAIL Advisor:
Marzyeh Ghassemi

Degree/Role:
PhD

Graduation Date:
September 2025

Job Type:
Full Time Position

Aparna Balagopalan

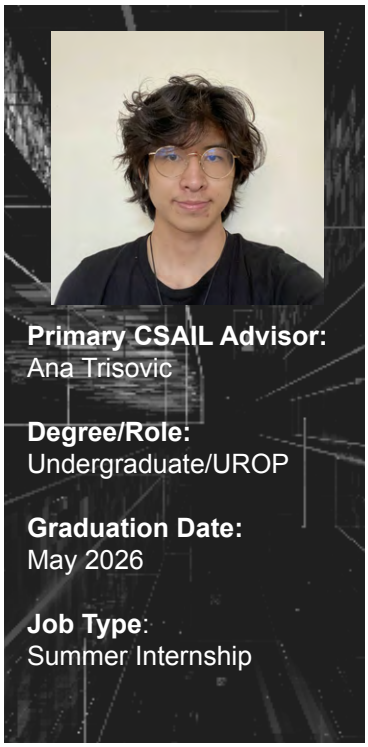
Contact Email: aparnab@mit.edu

- **Research Category**: AI
- **Research Area (specific)**: Responsible AI, Machine learning for healthcare
- **Research Group**: Healthy ML
- **Primary Community of Research (CoR) at CSAIL**: Vertical AI

Short Bio: Aparna Balagopalan is a PhD student in EECS at MIT. Her research broadly focuses on developing fair and robust models in socially-relevant contexts like healthcare, particularly by leveraging large vision and/or language models. Prior to this, she received a Master's degree from the University of Toronto and a BTech degree from IIT Guwahati. In the past, she has received an Amazon Doctoral Fellowship from MIT's Science Hub, a DeepMind Fellowship, and a MITACS Accelerate Scholarship.

Description of Research/Thesis Topic: I am broadly interested in developing techniques to support fair classification and ranking in healthcare contexts. In this scope, the themes of my own research are:
(1) Understanding and Improving Responsible Data Acquisition Practices, (2) Developing Algorithms and Measures for Fair Ranking, and (3) Studying Views of Interpretability to Achieve Fair Outcomes Through an HCI+AI lens.analysis

Additional Information:
- **Website**
- **Resume**



Primary CSAIL Advisor:
Ana Trisovic

Degree/Role:
Undergraduate/UROP

Graduation Date:
May 2026

Job Type:
Summer Internship

Alvin Banh

Contact Email: albanh@csail.mit.edu

- **Research Category**: AI
- **Research Area (specific)**: Foundation Models
- **Research Group**: FutureTech

Short Bio: Alvin Banh is a rising junior at MIT, majoring in computer science. He is an undergraduate researcher at MIT CSAIL.

Description of Research/Thesis Topic: Alvin is currently researching research artificial intelligence models, collect data from various research papers (academic, industrial, government, etc.), and consolidate the information in a datasheet. By tracking artificial intelligence's fast-paced evolution, new insights can be made from traits of successful foundation models.

Additional Information:
- **Website**
- **Resume**

Primary CSAIL Advisor:
Saman Amarasinghe

Degree/Role:
PhD

Graduation Date:
April 2025

Job Type:
Full Time Position

Ajay Brahmakshatriya

Contact Email: ajaybr@mit.edu

- **Research Category**: Languages & Verification;Networks;Systems
- **Research Area (specific)**: Compilers
- **Research Group**: COMMIT
- **Primary Community of Research (CoR) at CSAIL**: Vertical AI

Short Bio: Ajay is a 6th year PhD student advised by Prof. Saman Amarasinghe at CSAIL, MIT. His research interests are making it easier for folks to create their own programming languages with focus on high-performance systems domains. In the past he has worked on DSLs for domains like graphs and networks targeting a variety of architectures like CPUs, GPUs and domain specific hardware. His current work on BuildIt makes the process of designing and implementing DSLs easier while also providing other toolchain support like debugging.

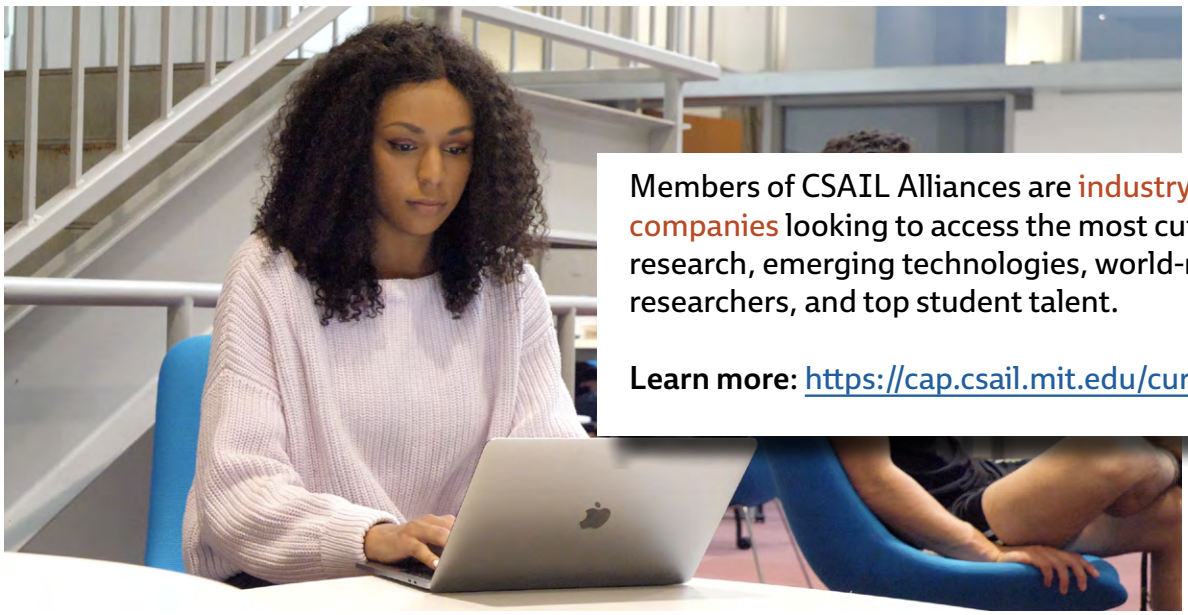
Description of Research/Thesis Topic: Ajay's thesis is titled "Democratizing DSL Development with the BuildIt Framework". He created the BuildIt system with the goal of enabling non-compiler domain experts to be able to write their high-performance Domain Specific Languages (DSLs) without having to learn or work with compilers researchers. BuildIt allows rapidly converting existing library code bases for the domain into high-performance languages.

BuildIt has been used to create DSLs for domains like graphs, regular expressions, streaming applications, compression and networks. Ajay's recent project NetBlocks built with BuildIt allows network engineers to create ad-hoc networking protocols and generate high-performance implementation for them.

Ajay has also developed other tools like D2X which add debugging and other toolchain support to existing and new DSLs.

Additional Information:

- **Website**
- **Resume**



Primary CSAIL Advisor:
Russ Tedrake

Additional Advisors:
Rebecca Jiang

Degree/Role:
Undergraduate/UROP

Graduation Date:
May 2027

Job Type:
Summer Internship

Rohan Bosworth

Contact Email: rohanb27@mit.edu

- **Research Category**: AI;Algorithms;Machine Learning;Robotics;Optimization
- **Research Area (specific)**: Optimization and Machine Learning methods for Robotic Manipulation and Planning
- **Research Group**: Robot Locomotion Group
- **Primary Community of Research (CoR) at CSAIL**: Applied Machine Learning

Short Bio: Driven artificial intelligence engineer with a distinguished background in computer science, optimization, and mathematical modeling. With a proven track record of pioneering solutions to complex technical challenges and leading high-impact projects, Rohan is eager to leverage his expertise in machine learning, algorithmic innovation, and system optimization to contribute groundbreaking advancements in deep learning and autonomous technologies. His experience in developing predictive models and optimizing systems positions me to make a great impact in pushing the frontiers of AI and computing.

Description of Research/Thesis Topic: Rohan;s research lies at the cutting edge of Artificial Intelligence and Optimization within robotics, where he leverages advanced methodologies, such as graphs of convex sets, to tackle complex motion planning challenges. Rohan has pioneered the integration of diffusion policies, transformers, and reinforcement learning to optimize robotic trajectories, utilizing powerful tools like Gurobi, Mosek, and OSQP for computational efficiency. A key focus of the work has been advancing the optimization of motion planning through convex sets, enabling robots to perform intricate tasks with precision. Moving forward, the research will delve into the application of diffusion policies for mastering complex tasks, such as autonomously cleaning cluttered environments. This exploration raises pivotal questions around data sourcing, requiring a sophisticated blend of human-provided data and planner-based inputs, with novel approaches to data mixing on the horizon.

Additional Information:

- **Website**
- **Resume**

Primary CSAIL Advisor:
Manolis Kellis

Degree/Role:
PhD

Graduation Date:
June 2027

Job Type:
Summer Internship

Robert Calef

Contact Email: rcalef@mit.edu

- **Research Category**: AI;Computational Biology
- **Research Area (specific)**: Deep learning for biological discovery
- **Research Group**: Computational Biology
- **Primary Community of Research (CoR) at CSAIL**: Applied Machine Learning

Short Bio: Skilled software engineer and machine learning scientist with 8+ years industry experience working at the intersection of biology, bioinformatics, and machine learning. Previous work includes genome assembly algorithms, distributed machine learning engineering workflows for early cancer detection from DNA sequencing data, and statistical modeling for biological data.

Description of Research/Thesis Topic: AI models for elucidating the dark matter of the human genome.

Additional Information:

- **Website**
- **Resume**

Primary CSAIL Advisor:
Dylan Hadfield-Menell

Degree/Role:
PhD

Graduation Date:
June 2026

Job Type:
Internship

Stephen Casper

Contact Email: scasper@csail.mit.edu

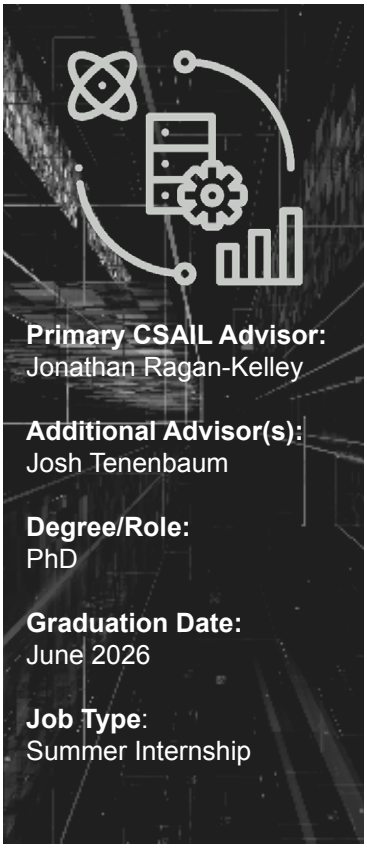
- **Research Category**: Artificial intelligence, Human-Computer Interaction (HCI), Networks
- **Research Area (specific)**: Interpretability, Adversarial Vulnerabilities, Learning From Humans

Short Bio: Stephen Casper is a PhD student studying methods for safe and interpretable AI systems.

Description of Research/Thesis Topic: Stephen's research focuses on building a toolbox for building AI systems that are robust, safe, and interpretable.

Additional Information:

- **Website**



Primary CSAIL Advisor:
Jonathan Ragan-Kelley

Additional Advisor(s):
Josh Tenenbaum

Degree/Role:
PhD

Graduation Date:
June 2026

Job Type:
Summer Internship

Kartik Chandra

Contact Email: kach@csail.mit.edu

- **Research Category**: Artificial intelligence; Languages & Verification; Machine Learning; Vision & Graphics
- **Research Area (specific)**: Differentiable programming
- **Research Group**: Visual Computing

Short Bio: A PhD student at MIT CSAIL studying visual computing systems with Jonathan Ragan-Kelley and Josh Tenenbaum. Previously, Kartik was an undergrad at Stanford University studying computer science, physics, and English literature. His research is supported by the Hertz Foundation Fellowship, the Paul & Daisy Soros Fellowship for New Americans, and the National Science Foundation's GRFP. In the past Kartik also spent time at Facebook, NVIDIA, UW Seattle, and Berkeley.

Description of Research/Thesis Topic:
Creating visual illusions by mounting "adversarial attacks" on principled probabilistic models of human visual perception.

Additional Information:

- **Website**
- **Resume**

Primary CSAIL Advisor:
Michael Cafarella

Additional Advisor(s):
Michael Stonebraker

Degree/Role:
PhD

Graduation Date:
May 2028

Job Type:
Summer Internship

Peter Baile Chen

Contact Email: peterbc@mit.edu

- **Research Category**: AI;Human Language;Systems
- **Research Area (specific)**: LLM reasoning, retrieval-augmented generation
- **Research Group**: Data Systems Group
- **Primary Community of Research (CoR) at CSAIL**: Applied Machine Learning

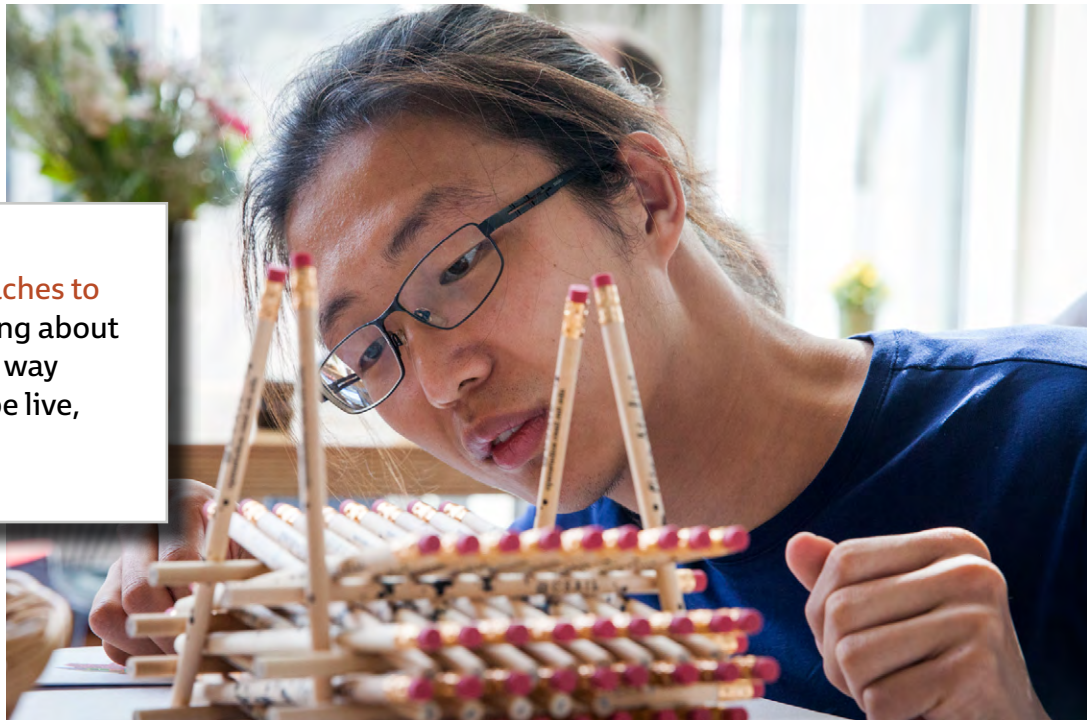
Short Bio: Peter is a PhD student at MIT CSAIL, co-advised by Mike Cafarella and Mike Stonebraker. He graduated from University of Pennsylvania where he worked on data management and machine learning systems.

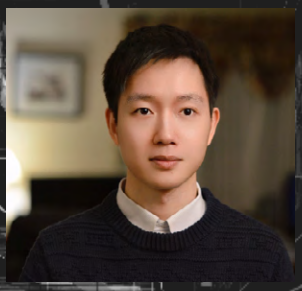
Description of Research/Thesis Topic: Peter is interested in improving LLM performance through better retrieval systems and planning/ reasoning components.

Additional Information:

- **Website**

CSAIL is committed to pioneering new approaches to computing that will bring about positive changes in the way people around the globe live, play, and work.





Primary CSAIL Advisor:
Wojciech Matusik

Degree/Role:
Postdoctorate

Graduation Date:
August 2024

Job Type:
Full-Time Position

Wenqiang (Winston) Chen

Contact Email: winstonchen@csail.mit.edu

- **Research Category**: HCI, Systems, AIoT
- **Research Area (specific)**: Ubiquitous Computing
- **Research Group**: Computational Design and Fabrication Group
- **Primary Community of Research (CoR) at CSAIL**: Human-Computer Interaction

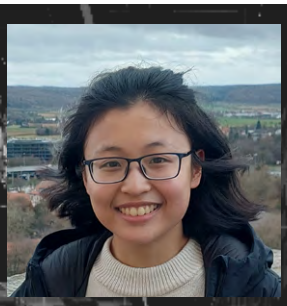
Short Bio: Wenqiang (Winston) Chen is a postdoctoral associate at MIT CSAIL. He received his PhD from the University of Virginia, working with Professor John Stankovic. His research lies at the intersection of Cyber-Physical Systems (CPS), ubiquitous and mobile sensing, and human-computer interaction (HCI). In particular, his research specializes in developing Vibrational Interaction (VibInt) systems to perceive and infer information from human bodies, robots, and environments through vibrations. VibInt has been proposed to advance a wide variety of research areas, such as wearable interactions, robotics, smart health, smart homes, privacy and security. He has published his research in various top conferences and journals (e.g., Mobicom, Ubicomp, and Transactions on Mobile Computing), obtained five patents, and won the IEEE SECON 2018 Best Paper Award, the ACM SenSys 2020 Best Demo Award and the ACM Mobicom 2022 S3 workshop Best Paper Award. (All as the first author) Winston is also a co-founder of VibInt AI, a startup working on wearable devices using VibInt technologies, and his research IPs have been used in thousands of commodity devices.

Description of Research/Thesis Topic: Uniting People, Bits, and Atoms through Vibrational Interaction (VibInt). All physical phenomena, even heartbeats, cause vibrations, spreading through media from human bodies, to machines, infrastructures, and even oceans. Rich information from these vibrations can be recognized by different sensors, including cameras, lasers, and accelerometers. Exploiting ubiquitous sensors and Artificial Intelligence, VibInt systems sense, understand, and interact with people and the physical world through universal vibrations. For example, VibInt captures subtle on-body vibrations to control smartwatches, smart glasses, and ubiquitous computers via typing on the skin and writing in the air. Also, VibInt can distinguish keystroke vibrations to authenticate users and enable password recovery in security research. Furthermore, VibInt detects passive building vibrations to localize pedestrians and monitor human activities in smart homes. Additionally, VibInt assists robotic fish in exploring various habitats by analyzing and recognizing water flow vibrations. The mission of this research is to integrate human, cyber, and physical experiences into an intelligent world of vibrational interactions.

Additional Information:

- **Website**

The CSAIL Alliances Annual Meeting is a 3-day event held typically in the spring each year for all Alliance programs.This benefit allows attendees a deep connection to the people, new technologies, member contacts, and research in the lab.



Primary CSAIL Advisor:
Phillip Isola

Additional Advisor(s):
Stefanie Jegelka, Antonio Torralba

Degree/Role:
PhD

Graduation Date:
August 2029

Job Type:
Summer Internship

Ching Lam Choi

Contact Email: chinglam@mit.edu

- **Research Category**: AI;Machine Learning;Vision & Graphics
- **Research Area (specific)**: Synthetic data, causality, the computational complexity of AI
- **Primary Community of Research (CoR) at CSAIL**: Embodied Intelligence

Short Bio: Ching Lam is a first year MIT EECS PhD student at CSAIL, co-supervised by Phillip Isola, Antonio Torralba and Stefanie Jegelka.

During her bachelor's in Hong Kong, she researched with wonderful people — Aaron Courville and Yann Dauphin at MILA (quantization); Wieland Brendel at Tübingen's Max Planck Institute (robustness and sparsity); Serge Belongie at Copenhagen's Pioneer Centre (unlearning); Hongsheng Li (GANs and knowledge distillation) at CUHK MMLab; Anthony Man-Cho So (optimisation), Farzan Farnia (generalisation and sample complexity) and Qi Dou (federated learning) at CUHK.

Description of Research/Thesis Topic: I am interested in probing the robustness, causal reasoning and epistemic capabilities of ML systems. Robustness aims to make systems workable and concerns problems like sustainable, privacy-preserving scaling laws for models with synthetic data. Causality seels to make models rational, understandable and reliable, to provide safety and symbolical logic guarantees for AI blackboxes. Epistemology is for understanding the extent of AI's capabilities, testing its limits in expression and generation through computational theory.

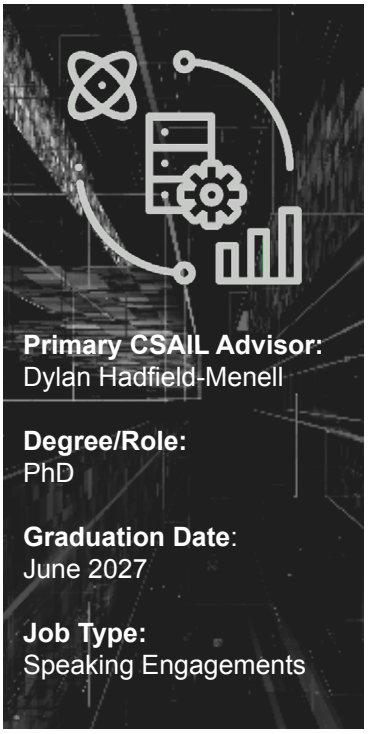
This is inspired by my time at Max Planck Tübingen; also, by recent work such as the "AI Scientist", "Galactica", DeepMind's "AlphaProof", works on length/scale generalisation and more.

Additional Information:

- **Website**
- **Resume**

"University relationships lead to industry innovations: Two-thirds of firms source innovations from universities. 9% of firms had their most successful innovation projects from the past few years come from a university."

-Neil Thompson, MIT CSAIL Research Scientist



Primary CSAIL Advisor:
Dylan Hadfield-Menell

Degree/Role:
PhD

Graduation Date:
June 2027

Job Type:
Speaking Engagements

Phillip Christoffersen

Contact Email: philljkc@mit.edu

- **Research Category**: Artificial intelligence; Human-Computer Interaction (HCI), Machine Learning
- **Research Area (specific)**: AI Alignment, Reinforcement Learning,
- **Research Group**: Algorithmic Alignment Group
- **Primary Community of Research (CoR) at CSAIL**: Embodied Intelligence

Short Bio: Phillip Christoffersen is currently a doctoral student at MIT CSAIL. Before the Algorithmic Alignment Group, Phillip was an undergraduate researcher at the University of Toronto, advised by Prof. Sheila McIlraith.

Description of Research/Thesis Topic: Phillip is broadly interested in reinforcement learning topics including AI alignment, neurosymbolic AI, and multi-agent reinforcement learning, as well as their intersections with theory and economics.

Additional Information:

- **Website**
- **Resume**

Primary CSAIL Advisor:
Antonio Torralba

Additional Advisor(s)
Stefanie Jegelka

Degree/Role:
PhD

Graduation Date:
June 2024

Job Type:
Full-Time Position, Internship

Ching-Yao Chuang

Contact Email: cychuang@csail.mit.edu

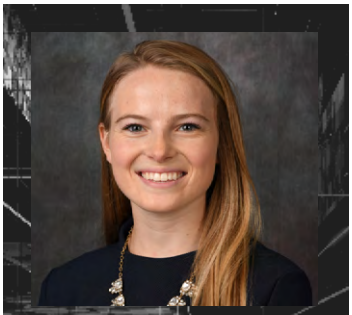
- **Research Category**: Machine Learning, Vision & Graphics
- **Research Area (specific)**: Machine Learning and Computer Vision
- **Research Group**: Vision & Graphics Group

Short Bio:Ching-Yao Chuang is a first year PhD in the Vision and Graphic Group and Machine Learning Group within MIT CSAIL. Prior to joining MIT, Ching-Yao was a RA in Machine Learning Lab at University of Toronto. He finished his bachelor's at National Tsing Hua University, Taiwan.

Description of Research/Thesis Topic:
Ching-Yao's research mainly lies in the intersection between computer vision and machine learning. He is interested in neural networks, optimization, Bayesian inference, generative models, and reinforcement learning.

Additional Information:

- **Website**



Primary CSAIL Advisor:
Daniel Weitzner
Taylor Reynolds

Degree/Role:
Master's Degree

Graduation Date:
May 2025

Job Type:
Summer Internship 2024

Chelsea Conard

Contact Email: chelseaconard@csail.mit.edu

- **Research Category**: Cybersecurity
- **Research Area (specific)**: Cyber Risk Quantification
- **Research Group:** Internet Policy Research Initiative (IPRI)

Short Bio: Chelsea is a student in the MIT Technology and Policy Program (TPP) addressing cybersecurity policy through research and education. Her past work spans SRC (strategy, risk and compliance), cyber intelligence, network security, and cloud security. She is conversationally proficient in English and French and has an intermediate skill in Mandarin and Spanish.

Description of Research/Thesis Topic: Chelsea's research is focused on building Cyber Risk Quantification and Cyber Policy.

Primary CSAIL Advisor:
Dylan Hadfield-Menell

Degree/Role:
Master's Degree

Graduation Date:
May 2024

Job Type:
Full-Time Position
Summer Intership

Taylor Lynn Curtis

Contact Email: tlcurtis@csail.mit.edu

- **Research Category**: Artificial intelligence; Human-Computer Interaction (HCI); Human Language; Machine Learning
- **Research Area (specific)**: AI Fairness/AI Alignment
- **Research Group**: Algorithmic Alignment Group
- **Primary Community of Research (CoR) at CSAIL**: Embodied Intelligence

Short Bio: Taylor Lynn is an S.M. candidate in technology and policy. Prior to her current degree, she obtained a bachelor of software engineering with a minor in political science from McGill University in Montreal, Canada. Her research interests include the effectiveness of governance surrounding large, generative models, quantifying the societal impact of AI, and more generally the regulatory frameworks that function in the technology space.

Description of Research/Thesis Topic: Adaptive regulations and internal procedural control to ensure aligned systems.

Additional Information:

- **Resume**

Primary CSAIL Advisor:
Dylan Hadfield-Menell

Degree/Role:
PhD

Graduation Date:
June 2027

Job Type:
Summer Internship

Mehul Damani

Contact Email: mehul42@csail.mit.edu

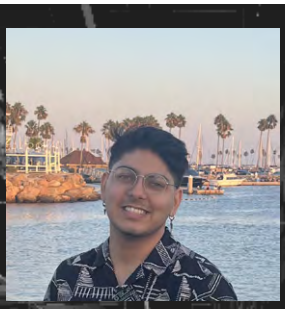
- **Research Category**: Artificial intelligence; Machine Learning; Robotics
- **Research Area (specific)**: Reinforcement Learning
- **Research Group:** Algorithmic Alignment Lab
- **Primary Community of Research (CoR) at CSAIL**: Embodied Intelligence

Short Bio: Mehul is a first year PhD student at the Algorithmic Alignment Lab in CSAIL. Prior to joining MIT, he worked on developing general-purpose curriculum learning methods for reinforcement learning agents and on applying reinforcement learning to domains such as multi-agent pathfinding and multi-agent traffic signal control. He worked with Professor Guillaume Sartoretti (NUS) and Professor Lerrel Pinto (NYU).

Description of Research/Thesis Topic: Mehul's research broadly aims to improve multi-agent reinforcement learning systems using techniques and ideas from model-based RL, intrinsic motivation, curriculum learning and reward design.

Additional Information:

- **Website**
- **Resume**



Primary CSAIL Advisor:
Pulkit Agrawal

Degree/Role:
PhD

Graduation Date:
May 2029

Job Type:
Summer Internship

Nitish Dashora

Contact Email: dashora@mit.edu

- **Research Category**: AI;Machine Learning;Robotics
- **Research Area (specific)**: Lifelong learning, open-endedness
- **Research Group**: Improbable AI
- **Primary Community of Research (CoR) at CSAIL**: Embodied Intelligence

Short Bio: Nitish Dashora was born and raised in Columbus, Ohio. Nitish is an EECS PhD Student at MIT CSAIL studying under Pulkit Agrawal supported by the NSF GRFP. He completed his undergraduate in EECS at UC Berkeley where he researched robotic AI under Sergey Levine and neural computation under Bruno Olshausen. Nitish also worked with Stuart Russell, Amazon AWS, and NASA JPL throughout an undergraduate career.

Description of Research/Thesis Topic: Nitish is currently researching robot learning, lifelong learning systems, foundation models, and open-ended knowledge acquisition. He is also interested in ML research, especially that which concerns reinforcement learning, unsupervised learning, and general intelligence. The goal is to uncover the underlying factors of human-level intelligence while exploring continually improving robotic AI systems.

Additional Information:

- **Website**
- **Resume**

Primary CSAIL Advisor:
Dr. James Glass

Degree/Role:
Postdoctorate

Graduation Date:
February 2024

Job Type:
Full-Time Position

Nauman Dawalatabad

Contact Email: nauman@csail.mit.edu

- **Research Category**: Artificial intelligence; Human-Computer Interaction (HCI); Human Language; Languages & Verification; Machine Learning
- **Research Area (specific)**: Speech processing
- **Research Group**: Spoken Language Systems
- **Primary Community of Research (CoR) at CSAIL**: Human Computer Interaction

Short Bio: Nauman Dawalatabad is a postdoctoral associate at the MIT Computer Science and Artificial Intelligence Laboratory (CSAIL), USA. He works in the Spoken Language Systems (SLS) group led by Prof. James Glass. Prior to joining MIT, he was a Lead Engineer at Samsung Research, Bangalore, India, where he worked on on-device speech recognition. He obtained his Ph.D. (with the Institute Research Award) in Computer Science and Engineering from the Indian Institute of Technology Madras (IIT Madras), India in 2021 working under the supervision of Prof. C. Chandra Sekhar and Prof. Hema A. Murthy. During his PhD, he was also a visiting research student and a core team member of the SpeechBrain group at Mila - Quebec AI Institute, Montreal, Canada, under supervision of Prof. Yoshua Bengio and Prof. Mirco Ravanelli. He is selected as one of the IEEE ICASSP Rising Stars in Signal Processing 2023. He also serves as a reviewer/PC member for various speech, NLP, and AI conferences and journals like Interspeech, ICASSP, WASPAA, ACL ARR, ICML SPIGM and others.

Description of Research/Thesis Topic: Robust speech recognition

Primary CSAIL Advisor:
Polina Golland

Degree/Role:
Postdoctorate

Graduation Date:
October 2024

Job Type:
Full Time Position

Neel Dey

Contact Email: dey@csail.mit.edu

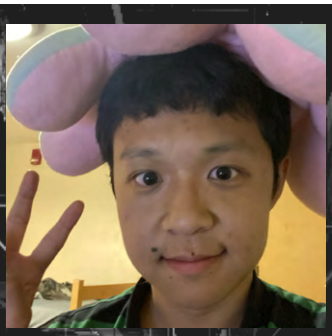
- **Research Category**: Computational Biology;Machine Learning;Vision & Graphics;Healthcare
- **Research Area (specific)**: Biomedical Computer Vision
- **Research Group**: Golland Group
- **Primary Community of Research (CoR) at CSAIL**: Vertical AI

Short Bio: Neel is a postdoc at CSAIL working with Polina Golland and received his PhD in Computer Science from NYU. He develops data-efficient learning methods for biomedical image analysis, with a particular emphasis on equivariant neural networks and domain randomization approaches for automatic generalization to unseen datasets. He has been the recipient of several outstanding reviewer awards at major conferences and his doctoral work on inductive biases in generative models was awarded NYU's Pearl Browstein dissertation award.

Description of Research/Thesis Topic: I tackle the pervasive lack of biomedical training data and supervision to create models that generalize to new deployment settings without the need for retraining, finetuning, or acquiring new data.

Additional Information:

- **Website**
- **Resume**



Primary CSAIL Advisor:
Kaiming He

Additional Advisors:
Tommi Jaakkola

Degree/Role:
PhD

Graduation Date:
June 2029

Job Type:
Internship

Mingyang Deng

Contact Email: dengm@mit.edu

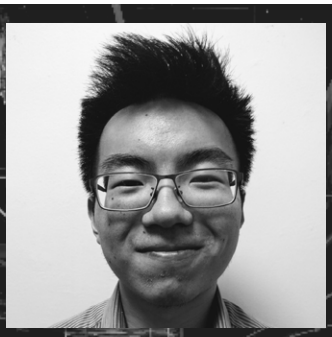
- **Research Category**: AI;Algorithms;Machine Learning;Vision & Graphics
- **Research Area (specific)**: Algorithms for generative models
- **Research Group:** Vision Group
- **Primary Community of Research (CoR) at CSAIL**: Applied Machine Learning

Short Bio: Mingyanf is an incoming PhD student working under the supervision of Kaiming He, focusing on algorithms for generative models. Mingyan completed undergraduate studies at MIT, where he delved into theoretical computer science and combinatorics research before being introduced to machine learning by Professor Tommi Jaakkola. In his spare time, Mingyang enjoys writing silly science fiction stories.

Description of Research/Thesis Topic: Machine learning, generative modeling, AI for science

Additional Information:

- **Website**
- **Resume**



Primary CSAIL Advisor:
Tim Kraska

Degree/Role:
PhD

Graduation Date:
June 2024

Job Type:
Internship

Jialin Ding

Contact Email: jialind@mit.edu

- **Research Category**: Systems
- **Research Area (specific)**: Machine Learning for systems

Short Bio: Jialin Ding is a first year CS PhD in the MIT Database Group where he is advised by Professor Tim Kraska. Jialin's interests lie broadly in the intersection of systems and machine learning. In the past, Jialin worked with Umar Farooq Minhas and the Database Group at Microsoft Research on updatable learned index structures. Prior to MIT, Jialin was an undergraduate at Stanford University where he worked on data-intensive systems with Professor Peter Bailis as part of Stanford DAWN.

Description of Research/Thesis Topic: As a first year PhD student, Jialin is exploring a variety of research topics at the intersection of systems and machine learning.

Additional Information:

- **Website**

Primary CSAIL Advisor:
Julian Shun

Degree/Role:
PhD

Graduation Date:
December 2028

Job Type:
Summer Internship

Josh Engels

Contact Email: jae@csail.mit.edu

- **Research Category**: Algorithms;Performance Engineering
- **Research Area (specific)**: Theory and practice of algorithms for big data
- **Primary Community of Research (CoR) at CSAIL**: Theory of Computation

Short Bio: Josh is a first year PhD student in the EECS department at MIT working with Prof. Julian Shun.

Description of Research/Thesis Topic: Josh Engels is interested in building high performance systems using novel algorithms with strong theoretical guarantees. Josh uses tools from randomized algorithms, parallel computing, and machine learning. Recently, Josh has been working on problems in approximate nearest neighbor search, large-scale graphs, computational geometry, and clustering.

Additional Information:

- **Website**

Primary CSAIL Advisor:
Pulkit Agrawal

Additional Advisor(s):
Ted Adelson

Degree/Role:
Postdoctorate

Graduation Date:
September 2023

Job Type:
Full Time Position

Haoshu Fang

Contact Email: fhs@mit.edu

- **Research Category**: AI;Robotics
- **Research Area (specific)**: Robotic manipulation
- **Research Group**: Improbable AI
- **Primary Community of Research (CoR) at CSAIL**:Embodied Intelligence

Short Bio: Haoshu Fang is a postdoc at MIT, working with Pulkit Agrawal and Edward Adelson. He is interested in robotic manipulation, aiming at breaking the “data wall” for robot learning. He was awarded the Microsoft Fellowship and Bytedance Fellowship during his PhD.

Description of Research/Thesis Topic: Robotic manipulation, robot learning

Additional Information:

- **Website**

Primary CSAIL Advisor:
Leslie Kaelbling

Additional Advisor(s)
Tomas Lozano-Perez

Degree/Role:
PhD

Graduation Date:
June 2025

Job Type:
Internship

Xiaolin Fang

Contact Email: xiaolinf@csail.mit.edu

- **Research Category**: Artificial intelligence, Robotics, Vision & Graphics
- **Research Area (specific)**: Perception system for mobile robots
- **Research Group**: LIS
- **Primary Community of Research (CoR) at CSAIL**: Embodied Intelligence

Short Bio: Xiaolin is a first year PhD student in the Learning and Intelligent Systems Group at MIT. She obtained her bachelor's at Zhejiang University, China.

Description of Research/Thesis Topic: Xiaolin's research interest mainly falls on robotics and computer vision. Recently, she is focused on the perception system of embodied agents that can support complex tasks in a real-world environment such as cleaning or searching for an object in a house.

Additional Information:

- **Website**

Primary CSAIL Advisor:
Polina Golland

Degree/Role:
PhD

Graduation Date:
May 2028

Job Type:
Summer Internship

Margherita Firenze

Contact Email: mfirenze@csail.mit.edu

- **Research Category**: AI;Machine Learning;Vision & Graphics
- **Research Area (specific)**: Medical Image Analysis
- **Research Group**: Medical Vision Group
- **Primary Community of Research (CoR) at CSAIL**: Applied Machine Learning

Short Bio: Margherita is a second-year PhD student at MIT working on computer vision for medical imaging. Her research aims to develop robust and effecient computer vision systems for clinical applications. She holds a BS in Electrical Engineering from Columbia University, where she worked on machine learning models for breast cancer detection using optical coherence tomography images.

Description of Research/Thesis Topic: Her research focuses on developing techniques for 3D reconstruction from motion-corrupted 2D images, with direct applications to fetal MRI imaging.

Additional Information:

- **Website**

Primary CSAIL Advisor:
Constantinos Daskalakis

Degree/Role:
PhD

Graduation Date:
June 2025

Job Type:
Internship

Maxwell Fishelson

Contact Email: maxfish@mit.edu

- **Research Category**: Artificial intelligence, Algorithms, Machine Learning
- **Research Area (specific)**: Statistical Learning and Algorithmic Game Theory
- **Primary Community of Research (CoR) at CSAIL**: Theory of Computation

Short Bio: Maxwell received his B.Sc. at MIT in mathematics and is continuing at MIT to receive his PhD in theoretical computer science.

Description of Research/Thesis Topic: Maxwell's research lies at the intersection of Machine Learning and Algorithmic Game Theory. His past work centered around the theory of auctions and online combinatorial markets. His current research studies the behavior of multiple agents dynamically learning in an adversarial environment.

Additional Information:

- **Website**

Primary CSAIL Advisor:
Julie Shah

Degree/Role:
PhD

Graduation Date:
June 2026

Job Type:
Full Time Position

Alex Forsey-Smerek

Contact Email: aforsey@mit.edu

- **Research Category**: AI;Human Computer Interaction (HCI);Robotics
- **Research Area (specific)**: Human Robot Interaction
- **Research Group**: Interactive Robotics Group
- **Primary Community of Research (CoR) at CSAIL**: Embodied Intelligence

Short Bio: Alex is a fifth-year PhD student in the Interactive Robotics group working with Professor Julie Shah. She is pursuing a PhD in Autonomous Systems from the AeroAstro department. Previously, she received both her bachelor's (2020) and master's (2022) degrees in Aerospace Engineering from MIT, and has spent time interning at MIT Lincoln Laboratory and NASA JPL. Her research is funded by a DoD NDSEG Fellowship.

Description of Research/Thesis Topic: Alex's research interests lie in developing methods that enable humans to accurately and efficiently task autonomous agents using diverse forms of human input. Her recent work focuses on reducing the amount of human input required for inverse reinforcement learning in multi-task settings via reward restructuring coupled with novel human input methods.

Additional Information:

- **Website**

Primary CSAIL Advisor:
Arvind Satyanarayan

Degree/Role:
Postdoctorate

Graduation Date:
July 2024

Job Type:
Full-Time Position 2024
IAP Internship 2024
Summer Internship 2024

Amy Fox

Contact Email: amyfox@mit.edu

- **Research Category**: Human-Computer Interaction (HCI)
- **Research Area (specific)**: Information Visualization
- **Research Group**: The Visualization Group

Short Bio: Amy Rae Fox is a Distinguished Postdoctoral Fellow in the Visualization Group at MIT CSAIL. Through her research she explores the myriad ways that humans externalize knowledge to support thinking, especially the construction of and interaction with graphic representations like charts, graphs, diagrams and systems of notation. Dr. Fox is jointly supported by the MIT School of Engineering Postdoctoral Fellowship for Engineering Excellence (SoE-PFEE) and MIT Computer Science and Artificial Intelligence Laboratory(CSAIL) METEOR Fellowship. In 2019 she was awarded a (NASA) Visionary Grant for Exploring Diverse Communities of Practice across Visualization in Science and Education'. She was also the recipient of a DoD NDSEG Fellowship (2016-2019), and is a Morehead-Cain Scholar (2000-2004). She holds a PhD (2022) in Cognitive Science from the University of California San Diego where she collaborated with the UCSD Design Lab, Early Learning and Cognition, and Cognitive Tools labs. She also holds an MA (2015) in Cognitive Visualization from CSU-Chico, an MSEd (2015) in Instructional Design from UPMF-France, and BS (2004) in Computer Science from the University of North Carolina at Chapel Hill.

Description of Research/Thesis Topic: At MIT, Dr. Fox is applying theory and methods from Cognitive Science to the emerging research area of interactive visualizations. She also lends her expertise to collaborations exploring the construction of social meanings through visualization, and how to make visual artifacts accessible for all readers. She is available for speaking engagements and consulting on 'cognitively informed design for information communication' as well as consulting and advisory positions with start-ups in the EdTech and Tools For Thinking design spaces.

Additional Information:
- **Website**
- **Resume**

Primary CSAIL Advisor:
Adrian V. Dalca

Additional Advisors:
John Guttag

Degree/Role:
PhD

Graduation Date:
May 2030

Job Type:
Summer Internship

Siyu (Catherine) Gai

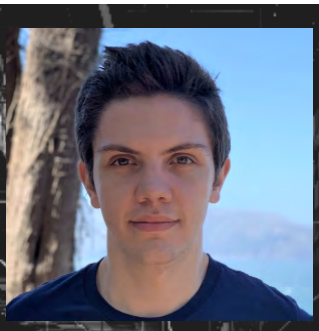
Contact Email: cath_gai@mit.edu

- **Research Category**: AI;Machine Learning;Vision & Graphics
- **Research Area (specific)**: Clinical Applications of Machine Learning in Medical Imaging
- **Research Group**: CAML (Clinical and Applied Machine Learning Group)
- **Primary Community of Research (CoR) at CSAIL**: Applied Machine Learning

Short Bio: Siyu (Catherine) Gai holds an undergraduate degree at UC Berkeley double majoring in Computer Science and Applied Mathematics, and is currently pursuing a PhD degree at MIT EECS, co-advised by Professor Adrian Dalca and John Guttag.
She has 5+ years of experience in Computer Vision as well as its application in medical imaging. Her current research focuses on novel biomedical image segmentation schemes that improves model performance on inputs with insufficient information for independent segmentation.

Description of Research/Thesis Topic: Clinical and applied Machine Learning, Machine Learning for healthcare, Computer Vision

Additional Information:
- **Website**
- **Resume**



Primary CSAIL Advisor:
Alekander Madry

Additional Advisor(s)
Samuel Hopkins

Degree/Role:
PhD

Graduation Date:
June 2026

Job Type:
Internship

Kristian Georgiev

Contact Email: krisgrg@mit.edu

- **Research Category**: Artificial intelligence, Algorithms & Theory, Machine Learning, Vision & Graphics
- **Research Area (specific)**: Robust ML
- **Research Group**: Madry Lab

Short Bio: Kristian Georgiev is interested in robust machine learning and statistics. His goal is to develop methods and algorithms that lead to scalable trustworthy models in the real world.

Description of Research/Thesis Topic: Kristian's research focuses on adversarial robustness in ML.

Additional Information:

- **Website**

Primary CSAIL Advisor:
Andrew Lo

Degree/Role:
Master's

Graduation Date:
September 2024

Job Type:
Full Time Position

Nina Gerszberg

Contact Email: Ninager@mit.edu

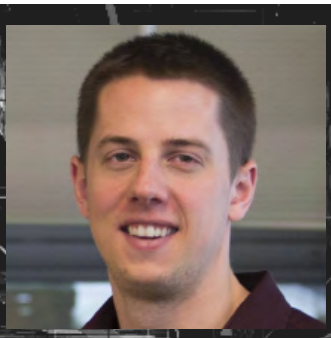
- **Research Category**: AI;Human Computer Interaction (HCI);Machine Learning;Robotics
- **Research Area (specific)**: Biases in LLMs
- **Research Group**: Lab of Financial Engineering

Short Bio: Nina is a Master's student whose research explored gender biases in large language models. Her Master's degree focused on AI and computer systems. She also completed her undergrad at MIT where she studied computer science and electrical engineering. In her free time, she runs MIT's climbing club.

Description of Research/Thesis Topic: Gender biases in LLMs in the context of hiring

Additional Information:

- **Website**
- **Resume**



Primary CSAIL Advisor:
Alan Edelman

Additional Advisor(s)
Chris Rackauckas

Degree/Role:
Postdoctoral

Job Type:
Full-Time Position

Albert Gnadt

Contact Email: gnadt@csail.mit.edu

- **Research Category**: Artificial intelligence, Machine Learning, Systems
- **Research Area (specific)**: Scientific machine learning
- **Research Group**: Julia Lab
- **Primary Community of Research (CoR) at CSAIL**: Applied Machine Learning

Short Bio: Albert is a postdoctoral associate in the Julia Lab within MIT CSAIL. His current research is focused on improving airborne magnetic anomaly navigation using machine learning approaches (and the Julia programming language). Albert received his B.S. degree in mechanical engineering from UW–Madison in 2015 and S.M. degree in aeronautics and astronautics from MIT in 2018. Albert previously worked on electric aircraft design as an NSF graduate research fellow, and he earned his private pilot license in 2020.

Description of Research/Thesis Topic: An airborne magnetic anomaly navigation system collects real-time magnetic field data and uses predetermined magnetic maps of the earth to estimate location by aiding an inertial navigation system (INS), which would otherwise drift. The central outstanding issue is handling corruption of the measured magnetic signal by the aircraft itself. Albert's research explores various approaches, primarily neural network-based, to enable high-accuracy magnetic navigation while using corrupted magnetic field measurements.

Additional Information:

- **Website**
- **Resume**

Primary CSAIL Advisor:
Daniel Sanchez

Additional Advisor(s)
Joel Emer

Degree/Role:
PhD

Graduation Date:
May 2028

Job Type:
Summer Internship

Courtney Golden

Contact Email: cgolden@csail.mit.edu

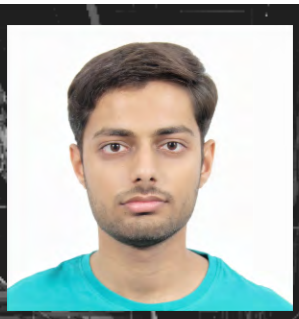
- **Research Category**: Architecture;Systems
- **Research Area (specific)**: Computer Architecture
- **Primary Community of Research (CoR) at CSAIL**: Systems

Short Bio: Courtney is a second-year PhD student at MIT EECS in CSAIL, where she is co-advised by Professor Daniel Sanchez and Professor Joel Emer. Prior to beginning her PhD, she received a B.S. in Electrical and Computer Engineering from Cornell University and interned at Amazon Web Services, Marvell Semiconductor, and GlobalFoundries. At MIT, she is a recipient of the Jacobs Presidential Fellowship and the National Science Foundation Graduate Research Fellowship.

Description of Research/Thesis Topic: Courtney's research centers on computer architecture, with a focus on combining hardware and software techniques to improve performance and energy efficiency. She is interested in accelerating sparse and irregular applications, with an eye towards scalability. Currently, her work focuses on spatial architectures for graph algorithms and sparse tensor algebra.

Additional Information:

- **Website**



Primary CSAIL Advisor:
Christina Delimitrou

Degree/Role:
PhD

Graduation Date:
July 2027

Job Type:
IAP Internship 2024;
Summer Internship 2024

Varun Gohil

Contact Email: varuncg@csail.mit.edu

- **Research Category**: Architecture; Systems
- **Research Area (specific)**: Datacenter Computing, Computer Architecture, Computer Systems
- **Research Group**: Computer Architecture
- **Primary Community of Research (CoR) at CSAIL**: Systems

Short Bio: Varun is a first year PhD student at MIT CSAIL working with Prof. Christina Delimitrou. His research interests lie in the fields of computer architecture, computer systems and datacenter computing. In the past, Varun has worked on projects related to datacenter computing at Google and at Cornell. Prior to joining MIT, he obtained his undergraduate degree in Computer Science from IIT Gandhinagar.

Description of Research/Thesis Topic: Currently, Varun is exploring multiple research directions to decide on a thesis topic. He is working on a controller that can automatically tune RPC configurations to prevent tail latency violations in cloud applications. Apart from that, he is working on developing an accelerator for serverless function communication using tightly coupled reconfigurable NICs.

Additional Information:
- **Website**
- **Resume**

Primary CSAIL Advisor:
Jim Glass

Degree/Role:
Postdoctorate

Job Type:
Full-Time Position

Yuan Gong

Contact Email: yuangong@csail.mit.edu

- **Research Category**: Artificial intelligence, Human Language, Machine Learning
- **Research Area (specific)**: Speech Recognition
- **Research Group**: Spoken Language Systems Group
- **Primary Community of Research (CoR) at CSAIL**: Applied Machine Learning

Short Bio: Yuan Gong is a postdoctoral associate at the Spoken Language Systems Group, MIT Computer Science and Artificial Intelligence Laboratory (CSAIL). He received his Ph.D. degree in Computer Science from the University of Notre Dame, and his B.S. degree in Biomedical Engineering from Fudan University. He won the 2017 AVEC depression detection challenge and one of his papers was nominated for the best student paper award in Interspeech 2019. Currently, his research interests include speech recognition, audio scene analysis and speech-based health systems.

Description of Research/Thesis Topic: Yuan's research focuses on audio and speech processing.

Additional Information:
- **Website**
- **Resume**

Primary CSAIL Advisor:
Adam Chlipala

Degree/Role:
PhD

Graduation Date:
June 2024

Job Type:
Internship

Samuel Gruetter

Contact Email: gruetter@mit.edu

- **Research Category**: Languages & Verification
- **Research Area (specific)**: Programming Languages and Verification, Interactive Theorem Proving, Compilers
- **Research Group**: Programming Languages and Verification

Short Bio: Samuel Gruetter started his PhD in Computer Science in fall 2017 under the supervision of Professor Adam Chlipala. Prior to CSAIL, Samuel received a Bachelor's and Master's at EPFL in Lausanne, Switzerland where he was a student research assistant in Professor Martin Odersky's Scala lab. Samuel worked on the theoretical foundations of the Scala language. He did a six-month Master's project internship at Princeton University with Professor Andrew Appel's group where he made improvements to their Verified Software Toolchain, and used it to verify a C implementation of the AES encryption algorithm. Samuel also worked at the University of Melbourne, Australia, with Dr. Toby Murray on information flow proofs for C programs. Samuel did a summer internship in Java Software Engineering at Accenture in Bangalore, India in 2012, a six month internship as an AngularJS and Java developer at Netcetera AG in Bern, Switzerland, in 2015, and a summer internship in formal software verification using Dafny with Amazon's Automated Reasoning Group in Seattle in 2019.

Description of Research/Thesis Topic: Samuel is currently working on a verified compiler from a simple C-like language to RISC-V machine code, which will serve as a platform for research projects on formally verified systems software.

Additional Information:

- **Website**
- **Resume**

Primary CSAIL Advisor:
Wojciech Matusik

Degree/Role:
PhD

Graduation Date:
August 2026

Job Type:
Internship

Minghao Guo

Contact Email: guomh2014@gmail.com

- **Research Category**: Vision & Graphics
- **Research Area (specific)**: Computational Design
- **Research Group**: Computational Design and Fabrication Group
- **Primary Community of Research (CoR) at CSAIL**: Embodied Intelligence

Short Bio: Minghao Guo's research interests lie in the intersection of computer graphics, computer vision, and computational design. He is excited to handle everything that is visually impressive and practically efficient, including but not limited to interactive inverse design, machine learning, geometry processing, and physics-based simulation.

Description of Research/Thesis Topic: Minghao's research interests lie in the intersection of computer graphics, computer vision, and computational design. He is excited to handle everything that is visually impressive and practically efficient, including but not limited to interactive inverse design, machine learning, geometry processing, and physics-based simulation.

Primary CSAIL Advisor:
Stefanie Jegelka

Degree/Role:
PhD

Graduation Date:
May 2027

Job Type:
Summer Internship 2024

Sharut Gupta

Contact Email: sharut@csail.mit.edu

- **Research Category**: AI; Machine Learning; Vision & Graphics
- **Research Area (specific)**: Machine Learning
- **Research Group:** Machine Learning Group

Short Bio: Sharut Gupta is a first year Ph.D. in the Machine Learning Group at MIT CSAIL. She received her undergraduate student at the Indian Institute of Technology Delhi (IIT Delhi), majoring in Mathematics and Computing.

Description of Research/Thesis Topic: Sharut's research mainly focuses on building robust, reliable and generalizable machine learning models. In particular, she is interested in optimization, self-supervised learning, unsupervised learning and representation learning. Her future interest is to focus on the theoretical nuances of machine learning and scale innovations for creating solutions to a broad range of societal domains like healthcare, education, and infrastructure.

Additional Information:

- **Website**

Primary CSAIL Advisor:
Manish Raghavan

Degree/Role:
2024

Graduation Date:
May 2024

Job Type:
Full Time Position 2024;
IAP Internship 2024

Lan Ha

Contact Email: lanha@mit.edu

- **Research Category**: Machine Learning
- **Research Area (specific)**: Causal Inference in Residential and Commercial Energy
- **Primary Community of Research (CoR) at CSAIL**: Applied Machine Learning

Short Bio: Lan Ha is an aspiring data scientist with an MS in EECS from MIT (expected June 2024), bringing a proven track record from data science roles at Rockstar Games and Faire (YC W19). Her current research project studies the impacts of behavioral interventions on sustainability and energy consumption reduction. Lan is interested in a full-time Data Scientist position starting in June 2024.

Description of Research/Thesis Topic: Lan's thesis aims to investigate the effectiveness of low-cost interventions in promoting energy conservation in commercial and residential environments. Leveraging social norm experimental design and machine learning, this thesis contributes to the limited empirical evidence on behavioral nudges in energy conservation in commercial settings. Findings from this thesis have important implications for companies, households, policymakers, and researchers in promoting sustainable practices in both the workplace and the home.

- **Resume**

Primary CSAIL Advisor:
Pulkit Agrawal

Degree/Role:
PhD

Graduation Date:
May 2027

Job Type:
Summer Internship

Seungwook Han

Contact Email: swhan@mit.edu

- **Research Category**: AI;Machine Learning;Vision & Graphics
- **Research Area (specific)**: Generative modeling, scaling of foundation models, representation learning
- **Research Group:** Embodied Intelligence
- **Primary Community of Research (CoR) at CSAIL**: Embodied Intelligence
-

Short Bio: Seungwook is a PhD student at MIT CSAIL and EECS, advised by Prof. Pulkit Agrawal. Prior to MIT, he was at MIT-IBM Watson AI Lab for two years, building energy efficient generative models and foundation models for vision. He received his BA in Computer Science-Statistics from Columbia University, where he spent a wonderful time with Prof. Hod Lipson and Jiook Cha on bridging cognitive science and AI. He is currently a NSF CSGrad4US Fellow.

Description of Research/Thesis Topic: His research investigates the science of deep learning and the key components for learning generalizable, powerful representations of the world. His current projects specifically work towards improving the knowledge and reasoning abilities of foundation models and enabling the personalization of language models.

Additional Information:

- **Website**

Primary CSAIL Advisor:
David Karger

Degree/Role:
PhD

Graduation Date:
June 2025

Job Type:
Internship

Leila Hampton

Contact Email: lelia@csail.mit.edu

- **Research Category**: Artificial intelligence, Human-Computer Interaction (HCI), Machine Learning, Web Science
- **Research Area (specific)**: Human-centered AI, statistical learning theory, computational sustainability, privacy and ethics
- **Research Group**: Haystack Group
- **Primary Community of Research (CoR) at CSAIL**: Computing and Society

Short Bio: Lelia (lee-luh) Hampton is a first year PhD student in Computer Science at the Massachusetts Institute of Technology. Her broad research interests are computing for social good. She is an MIT Presidential Fellow, an Alfred P. Sloan Scholar, and she has received honorable mention for the Ford Foundation Fellowship. Lelia earned a Bachelor of Science in Computer Science, Summa Cum Laude, with minors in comparative women's studies and mathematics from Spelman College (Class of 2020) where she was inducted into Phi Beta Kappa. During undergrad, she interned at the MIT Media Lab, Microsoft Research, Georgia Tech Research Institute, and NASA. She has been a passionate volunteer and mentor for students from underrepresented minorities through her work in computer science teaching and mentoring programs, including Black Girls CODE, Georgia Tech Catalyst, CodeHouse, NSBE, MIT's GradDiversity Ambassadorship, and MIT's Graduate Application Assistance Program (GAAP). Leila uses they/she pronouns.

Description of Research/Thesis Topic: Leila is interested in designing and building systems for marginalized groups with pressing needs, statistical learning theory and its application to the natural sciences, computational social science, computational sustainability, and privacy and ethics.

Additional Information:

- **Website**

Primary CSAIL Advisor:
Dylan Hadfield-Menell

Degree/Role:
PhD

Graduation Date:
May 2024

Job Type:
Internships

Andreas Haupt

Contact Email: haupt@mit.edu

- **Research Category**: Artificial intelligence, Human-Computer Interaction (HCI), Systems
- **Research Area (specific)**: Mechanism Design for Value Alignment, Federated Learning and Multi-Player Reinforcement Learning
- **Primary Community of Research (CoR) at CSAIL**: Computing and Society

Short Bio: Andreas holds degrees from German universities, M.Sc. from the University of Bonn (Mathematics, Economics); B.Sc. from the University of Frankfurt (CS). He has work experience as a high school teacher for Teach First Deutschland (teachfirst.de) and in policy through work for the European Commission's competition unit for data and the German federal parliament. He is the current leader of the AI Ethics Reading Group and affiliated with the Schwarzman College of Computing's Institute for Data, Systems, and Society.

Description of Research/Thesis Topic: Andy studies how online learning on platforms impacts who gets, consumes, and likes what. He does so by testing the long-term consequences of recommendation, and the competitive dynamics implied by preferencing policies. He also studies the social dynamics, risk preferences, and institution design for interacting reinforcement learning agents

Additional Information:

- **Website**
- **Resume**

Primary CSAIL Advisor:
Josh Tenenbaum

Degree/Role:
Undergraduate/UROP

Graduation Date:
May 2025

Job Type:
Full Time Position

Almog Hilel

Contact Email: almogh@mit.edu

- **Research Category**: AI;Human Computer Interaction (HCI);Machine Learning
- **Research Area (specific)**: Artificial Intelligence and Human Mind
- **Research Group:** Computational Cognitive Science Group
- **Primary Community of Research (CoR) at CSAIL**: Computational Cognitive Science Group

Short Bio: Almog is pioneering AI research at the Computer Science and Artificial Intelligence Laboratory.

Description of Research/Thesis Topic: Almog's research is centered on the intersection of psychology, cognitive science, and artificial intelligence.

Additional Information:

- **Website**

Primary CSAIL Advisor:
John J. Leonard

Degree/Role:
Postdoctorate

Graduation Date:
August 2026

Job Type:
Full Time Position

Jungseok Hong

Contact Email: jungseok@csail.mit.edu

- **Research Category**: AI;Robotics
- **Research Area (specific)**: Underwater Robot Perception, Semantic SLAM
- **Research Group:** Marine Robotics Group

Short Bio: Jungseok Hong is a Postdoctoral Associate at the MIT Computer Science and Artificial Intelligence Laboratory (CSAIL), working within the Marine Robotics Group. He previously earned his Ph.D. in Computer Science from the University of Minnesota.

Description of Research/Thesis Topic: He focuses on tackling robotic perception challenges in unstructured environments, such as underwater settings. His research is centered on enhancing robots' semantic understanding of these environments by developing more robust semantic maps through vision-based and multi-modal sensor approaches.

Additional Information:

- **Website**
- **Resume**

Primary CSAIL Advisor:
Stefanie Mueller

Degree/Role:
PhD

Graduation Date:
2026

Job Type:
IAP Internship 2023;
Summer Internship 2023

Cedric Honnet

Contact Email: honnet@csail.mit.edu

- **Research Category**: Human-Computer Interaction (HCI)
- **Research Area (specific)**: Wearables, eTextiles, embedded systems, sensors, digital fabrication.
- **Research Group:** HCIE
- **Primary Community of Research (CoR) at CSAIL**: Human-Computer Interaction

Short Bio: With a background in embedded systems, Cedric has been exploring the connections between physical computing, interactivity and the arts by travelling the world of research labs and hackerspaces. He worked as a firmware engineer and "InterHacktivist" in the Silicon Valley, co-founded a couple of companies developing tangible interfaces, and created interactive systems/installations worldwide. He has worked on eTextile music controllers, augmented immersive systems, interactive art pieces, modular implants, 3D positioning systems and many other Open-Source projects.

Description of Research/Thesis Topic: Miniaturization of electronics to seamlessly integrate sensing, processing and actuating in wearable interfaces.

Additional Information:

- **Website**
- **Resume**

Primary CSAIL Advisor:
Una-May O'Reilly

Degree/Role:
Master's

Graduation Date:
May 2026

Job Type:
Full Time Position
Summer Internship

Strahinja Janjusevic

Contact Email: strajo22@mit.edu

- **Research Category**: AI;Human Computer Interaction (HCI);Machine Learning;Cyber Security
- **Research Area (specific)**: Applications of Artificial Intelligence in Cyber Security
- **Research Group:** Anyscale Learning For ALL (ALFA)
- **Primary Community of Research (CoR) at CSAIL**: Applied Machine Learning

Short Bio: Strahinja Janjusevic is a S.M. candidate in Technology and Policy, specializing in Artificial Intelligence and Cyber Security. Prior to his current degree Strahinja obtained a bachelor of science with a dual Bachelor of Science in Cyber Operations and Computer Science from the United States Naval Academy. He gained hands-on experience through internships at Microsoft, where he contributed to incident analysis and API development, and at NASA, where he was working on 3D rendering technology for solar image visualization. Leadership and academic excellence has been recognized through various awards, including the National Security Agency's Center of Academic Excellence Certificate.

Description of Research/Thesis Topic: Strahinja's research at MIT focuses on computationally replicating Adversarial Intelligence, specifically the intent, strategy, and tactics adversaries use in competitive learning environments. He is currently working on developing ALFA agents that compete in CybORG, leveraging Large Language Models and BRON, supported by a coevolutionary algorithm.

Additional Information:

- **Website**

Primary CSAIL Advisor:
Marzyeh Ghassemi

Additional Advisor(s)
Collin Stultz

Degree/Role:
PhD

Graduation Date:
May 2027

Job Type:
Summer Internship 2023

Hyewon Jeong

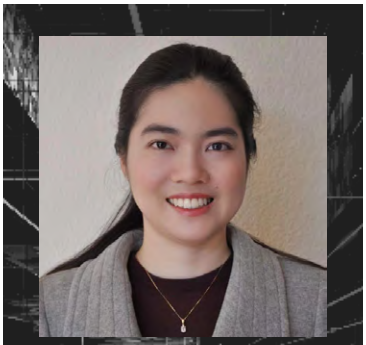
Contact Email: hyewonjeong@csail.mit.edu

- **Research Category**: Artificial intelligence; Machine Learning; Healthcare
- **Research Area (specific)**: Machine Learning for Healthcare
- **Research Group**: Health ML
- **Primary Community of Research (CoR) at CSAIL:** Applied Machine Learning

Short Bio: Hyewon Jeong is a Ph.D. student in Electrical Engineering and Computer Science at MIT, working with Prof. Marzyeh Ghassemi and Prof. Collin Stultz. She has co-affiliated with CSAIL, IMES, and Mass General Brigham. Before joining MIT, she received a B.S. in Biological Sciences, M.S. in Computer Science from KAIST, and M.D. at Yonsei University.

Description of Research/Thesis Topic: Her primary research focus has been on developing and applying machine learning methods to solve real-world clinical tasks using time-series electronic health record data and signal data.

- **Website**
- **CV**



Primary CSAIL Advisor:
David Sontag

Degree/Role:
PhD

Graduation Date:
May 2024

Job Type:
Full-Time Position 2024

Christina X Ji

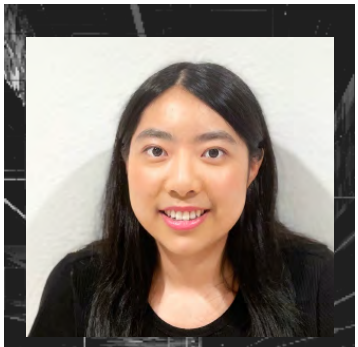
Contact Email: cji@mit.edu

- **Research Category**: Machine Learning for Healthcare; Transfer Learning; Causal Inference
- **Research Area (specific)**: Machine Learning for Healthcare; Causal Inference
- **Research Group**: Clinical Machine Learning Group

Short Bio: Christina is an EECS PhD student working on machine learning, transfer learning, causal inference, and healthcare applications. She received her BS and Master of Engineering in computer science from MIT in 2019. Previously, she interned at LinkedIn, Philips and IBM Research.

Description of Research/Thesis Topic: Christina is interested in detecting distribution shifts in healthcare and other real-world settings and developing transfer learning algorithms. She has also worked on evaluating treatment effects and reinforcement learning policies with causal inference methods.

Additional Information:
- **Website**
- **Resume**



Primary CSAIL Advisor:
Marzyeh Ghassemi

Degree/Role:
PhD

Graduation Date:
June 2026

Job Type:
Internship

Qixuan Jin

Contact Email: qixuanj@mit.edu

- **Research Category**: Machine Learning
- **Research Area (specific)**: Machine Learning + Healthcare
- **Research Group**: Healthy ML

Short Bio: Qixuan (Alice) Jin is a first year PhD student in CSAIL. Alice completed her B.S. in Computer Science in 2021 at the California Institute of Technology. During her time at Caltech, she did research related to COVID-19 mortality and cases time series prediction with Professor Yaser Abu-Mostafa.

Description of Research/Thesis Topic: Alice is currently involved with Machine Learning + Healthcare research as part of Professor Marzyeh Ghassemi's group. She is broadly interested in how to incorporate expert domain knowledge in data-driven models within the context of medical and biological datasets.

Additional Information:
- **Resume**

Primary CSAIL Advisor:
Lalana Kagal

Degree/Role:
Master's

Graduation Date:
May 2024

Job Type:
Full Time Position
Summer Internship

Minseok Jung

Contact Email: msjung@csail.mit.edu

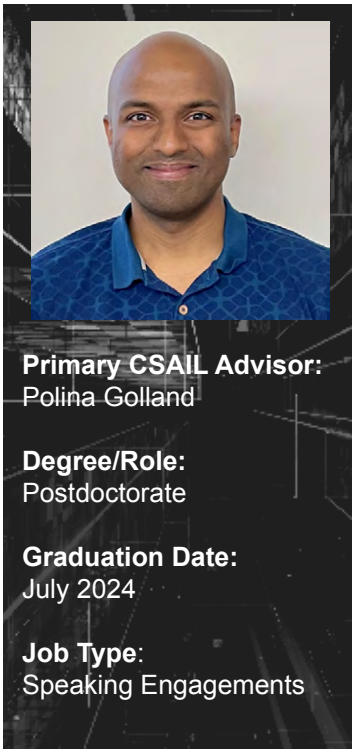
- **Research Category**: AI;Human Computer Interaction (HCI);Human Language;Languages & Verification;Web Science
- **Research Area (specific)**: AI Ethics
- **Research Group**: Decentralized Information Group
- **Primary Community of Research (CoR) at CSAIL**: Computing and Society

Short Bio: Minseok "Mason" Jung is a graduate student researcher in the Decentralized Information Group at the Computer Science and Artificial Intelligence Laboratory (CSAIL). Minseok received the first place prize in the MIT Policy Hackathon 2021 and has received the Bernard Rabinowitz (1944) Fellowship at the MIT Institute for Data, Systems, and Society. Minseok is a Social and Ethical Responsibilities of Computing (SERC) Scholar at MIT Schwarzman College of Computing and pursuing a master's degree in Technology and Policy.

Description of Research/Thesis Topic: Minseok Jung is developing AI writing policy for MIT

Additional Information:

- **Website**
- **Resume**



Primary CSAIL Advisor:
Polina Golland

Degree/Role:
Postdoctorate

Graduation Date:
July 2024

Job Type:
Speaking Engagements

Neerav Karani

Contact Email: nkarani@csail.mit.edu

- **Research Category**: AI; Machine Learning; Vision & Graphics; Medical Imaging, Medical Image Analysis
- **Research Area (specific)**: Medical Image Analysis
- **Research Group**: Medical Vision Group
- **Primary Community of Research (CoR) at CSAIL:** Visual Computing

Short Bio: Neerav Karani is a postdoctoral fellow in Polina Golland's Medical Vision group at CSAIL, MIT. He is partially funded by the Swiss National Science Foundation's postdoc mobility fellowship. Before coming to the US, he completed his MSc in biomedical imaging and PhD in biomedical image computing group at ETH Zurich. His PhD advisor was Ender Konukoglu. Before his time in Zurich, he obtained MTech (biomedical design) and BTech (engineering design) degrees from Indian Institute of Technology Madras, and worked for Philips Healthcare as a firmware developer for x-ray imaging systems for two years.

Description of Research/Thesis Topic: The main focus of his research is the topic of distribution shifts in machine learning methods for medical image analyses. Such shifts are a hindrance in many machine learning methods and for several kinds of image analyses, ranging from segmentation, classification, enhancement to anomaly detection. In particular, the performance of the otherwise highly successful deep learning methods is also substantially marred in the face of such shifts. A wide spectrum of distribution shifts are pertinent in medical imaging, including those caused by changes in acquisition protocols, image quality as well as population demographics. Apart from this,Neerav is also interested in generative modeling, image restoration problems and learning from small datasets.

Additional Information:

- **Website**

Primary CSAIL Advisor:
Mohammad Alizadeh

Additional Advisor(s)
Hari Balakrishnan

Degree/Role:
PhD

Graduation Date:
May 2026

Job Type:
Summer Internship

Pantea Karimi

Contact Email: pkarimib@mit.edu

- **Research Category**: Machine Learning;Networks;Systems
- **Research Area (specific)**: Real-time Video Applications, Heuristic Analysis
- **Research Group:** NMS
- **Primary Community of Research (CoR) at CSAIL**:Systems

Short Bio: Pantea Karimi is a rising fourth-year Ph.D. student in MIT CSAIL. She received a master's from MIT in 2023 working on real-time video applications. Pantea completed an internship at Microsoft Reseach summer 2024 where she worked on analyzing and mitigating the risks of heuristics on the clouds.

Description of Research/Thesis Topic: She is focusing on efficient heuristic analyzers and robust and reliable applications using LLMs. Previously, Pantea has been interested in enhancing the quality of real-time video applications. She has worked on video congestion control algorithms and improving video conferencing applications using advanced computer vision and video compression techniques.

Additional Information:

- **Website**
- **Resume**

Primary CSAIL Advisor:
Bruce Tidor

Degree/Role:
PhD

Graduation Date:
May 2024

Job Type:
Full-Time Position

Elijah Karvelis

Contact Email:karvels2@csail.mit.edu

- **Research Category**: Computational Biology;Machine Learning
- **Research Area (specific)**: Molecular modeling, machine learning, and protein design
- **Research Group**: Computational Biology
- **Primary Community of Research (CoR) at CSAIL:** Biology

Short Bio: Eli is a final year PhD candidate in Bruce Tidor's lab, where he combines molecular modeling and machine learning to develop protein engineering strategies. Originally from rural Illinois, Eli previously received his BS in Chemical Engineering from UIUC, where he did experimental work related to biomaterials and brain cancer. In the future, he is interested in developing and applying both physics-based and data-driven approaches for protein and small molecule design.

Description of Research/Thesis Topic: Eli's thesis has focused on developing an enzyme redesign method for increasing the catalytic activity of a natural enzyme on one of its native substrates. This work involved using rare event sampling methods and QM/MM molecular dynamics to simulate enzyme-catalyzed reactions. Machine learning was then used to characterize relevant features for successful catalysis and, in combination with physics-based protein redesign algorithms, select mutations expected to increase specific activity.

Additional Information:

- **Website**

Primary CSAIL Advisor:
Daniela Rus

Degree/Role:
Postdoctorate

Graduation Date:
January 2025

Job Type:
Full-Time Position

Byungchul Kim

Contact Email: bckim@csail.mit.edu

- **Research Category**: AI;Robotics
- **Research Area (specific)**: Soft Robotics
- **Research Group**: Distributed Robotics Lab

Short Bio: A Postdoctoral Researcher at the MIT CSAIL working with Professor Daniela Rus, since Jan 2023. In CSAIL, currently developing tendon-driven soft robots with computational co-design framework. Before joining MIT, a Postdoctoral Researcher at Soft Robotic Research Center (SRRC) in Seoul National University (SNU), working with Professor Kyu-jin Cho (Department of Mechanical engineering, SNU).

Description of Research/Thesis Topic: Tendon-driven Soft Robotic Glove for the disabled people

Additional Information:

- **Website**
- **Resume**

Primary CSAIL Advisor:
Dylan Hadfield-Menell

Degree/Role:
PhD

Graduation Date:
May 2026

Job Type:
Internship

Jovana Kondic

Contact Email: jkondic@mit.edu

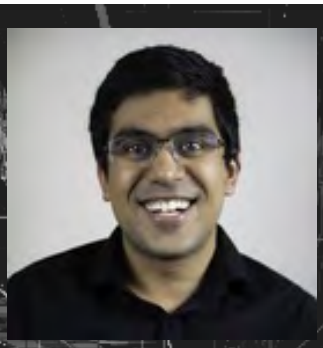
- **Research Category**: Artificial intelligence, Robotics
- **Research Area (specific)**: Reinforcement Learning, Inverse Planning, Human – Robot Interaction
- **Research Group**: Algorithmic Alignment Group
- **Primary Community of Research (CoR) at CSAIL**: Embodied Intelligence

Short Bio: Jovana is a PhD student in CSAIL, Department of Electrical Engineering and Computer Science at MIT, advised by Dylan Hadfield-Menell. Her research interests revolve around building socially-aware intelligent systems. Previously, Jovana obtained her BSE degree in Electrical Engineering from Princeton University, and was a Stanford SURF Scholar.

Description of Research/Thesis Topic: Jovana's research focuses on building interactive AI agents that 1) effectively learn from human input, and 2) understand + act in accordance with human preferences, intentions, and values.

Additional Information:

- **Website**



Primary CSAIL Advisor:
Leslie Kaelbling

Additional Advisor(s):
Tomas Lozano-Perez

Degree/Role:
PhD

Graduation Date:
April 2026

Job Type:
IAP Internship 2023;
Summer Internship 2024;
Speaking Engagements

Nishanth Kumar

Contact Email: njk@csail.mit.edu

- **Research Category**: Artificial intelligence; Machine Learning; Robotics
- **Research Area (specific)**: Neurosymbolic AI for robotic decision making
- **Research Group**: Learning and Intelligent Systems (LIS)
- **Primary Community of Research (CoR) at CSAIL**: Embodied Intelligence

Short Bio: Nishanth Kumar is a PhD student studying the intersection of AI and Robotics. His work has spanned a wide variety of areas related to robotics, including probabilistic models for robot vision, active learning for self driving vehicles, and applying VR/AR to human-robot communication. Previously, he obtained a Bachelor of Science degree in Computer Engineering from Brown University.

Description of Research/Thesis Topic: Nishanth's current research focuses on combining modern machine learning methods with more classical planning and model-based reasoning systems in order to develop robots that learn from data but can also robustly generalize to real-world variations in tasks. In particular, he's developing neurosymbolic methods inspired by model-based reinforcement learning to learn models of the world conducive to task and motion planning. He hopes his work will have applications to home and warehouse robotics, self-driving vehicles, and other automated decision making systems.

Additional Information:

- **Website**
- **Resume**

Primary CSAIL Advisor:
Mateo Reveiz

Degree/Role:
Undergraduate/UROP

Graduation Date:
May 2025

Job Type:
Full Time Position

Davide Kwabi-Addo

Contact Email: dkwabiad@mit.edu

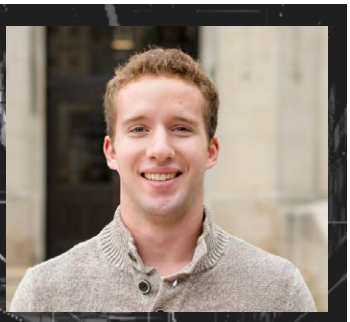
- **Research Category**: AI;Computational Biology;Machine Learning
- **Research Area (specific)**: Antibody-Virus Neutralization
- **Research Group:** Barzilay Group
- **Primary Community of Research (CoR) at CSAIL**: Applied Machine Learning

Short Bio:David Kwabi-Addo is a member of the MIT Class of 2025, majoring in Molecular Biology and Computer Science. He excels at integrating computational and biological sciences and has extensive experience managing healthcare-related data. David has developed advanced skills in Data Mining, Data Management, and Machine Learning through his roles at Google, Howard University, and Harvard Medical School. He is proficient in Python, Java, HTML, LaTeX, and R. Passionate about education in these fields, David actively mentors students with organizations such as the National Society of Black Engineers (NSBE). He has led a tutoring clinic for highschoolers at the MIT Jameel Clinic, with an emphasis of the role of machine learning in healthcare. As president of the MIT Chapter of the Eta Kappa Nu (HKN) Honor Society, David demonstrates leadership and commitment to academic excellence. He also fosters student-faculty connections through his active involvement in Student Government.

Description of Research/Thesis Topic: David's research focuses on leveraging structural prediction models, such as AlphaFold, to enhance the performance of machine learning models for antibody neutralization. His goal is to develop advanced models that accurately predict the neutralization capacities of antibodies, ultimately contributing to the development of more effective antibodies for human health. Additionally, he is investigating how modeling glycans commonly found on viral envelopes can lead to improvements in human health.

Additional Information:

- **Resume**



Primary CSAIL Advisor:
Aude Oliva

Degree/Role:
PhD

Graduation Date:
May 2025

Job Type:
Full Time Position

Benjamin Lahner

Contact Email: blahner@mit.edu

- **Research Category**: Computational Biology;Human Computer Interaction (HCI);Machine Learning;Vision & Graphics
- **Research Area (specific)**: Embodied Intelligence
- **Primary Community of Research (CoR) at CSAIL**: Embodied Intelligence

Short Bio: Benjamin is a fifth year PhD student at the intersection of cognitive neuroscience and computer vision. He also has experience in human factors engineering and design where he has applied his research skills to develop better consumer products and user experiences. Previously, Benjamin obtained his BS degree in biomedical engineering from Boston University.

Description of Research/Thesis Topic: Benjamin's research leverages machine learning and deep neural networks to better understand human vision and memory. In particular, he investigates how large-scale neuroimaging datasets can be effectively combined for novel insights into brain function.

Additional Information:
- **Website**

Primary CSAIL Advisor:
Russ Tedrake

Degree/Role:
PhD

Graduation Date:
June 2025

Job Type:
Full Time Position

Antoine Leeman

Contact Email: aleeman@mit.edu

- **Research Category**: AI;Algorithms;Performance Engineering;Robotics
- **Research Area (specific)**: Optimization

Short Bio: Antoine Leeman is a Ph.D. candidate at ETH Zurich, specializing in Model Predictive Control (MPC) for robotics applications. His research, co-supervised and funded by the European Space Agency, involves advanced motion planning, control, and machine learning. Antoine has a robust academic background with double master's degrees in aerospace engineering and automatic control. He has also gained significant international experience through fellowships and internships at MIT, KAIST, and ESA. He is an active researcher with multiple publications in leading journals and conferences, focusing on control systems, optimization and machine learning.

Description of Research/Thesis Topic: Predictive Control and Machine Learning: Advancing Safe High-Performance Autonomous Robotics

Additional Information:
- **Website**
- **Resume**

Primary CSAIL Advisor:
Alan Edelman

Additional Advisor(s)
Chris Rackauckas

Degree/Role:
PhD

Graduation Date:
May 2024

Job Type:
Internship

Alexander Lenail

Contact Email: lenail@mit.edu

- **Research Category**: Computational Biology, Machine Learning
- **Research Area (specific)**: Gene Regulation, Scientific computing
- **Research Group**: Julia Lab
- **Primary Community of Research (CoR) at CSAIL**: Applied Machine Learning

Short Bio: Alexander Lenai is interested in computational tools for Biological Analysis, Understanding, and Design. Currently, he is a second year PhD student in Computational Systems Biology at MIT working with Chris Rackauckas, Alan Edelman, and Jonathan Weissman. He has been a researcher at Google Brain Genomics, and prior to that in the Fraenkel lab at MIT developing visualization and machine learning tools to study neurodegenerative diseases such as ALS and ALD.

Description of Research/Thesis Topic: Alexander is in Jonathan Weissman and Alan Edelman's labs, working on inferring/fitting ODE/SDE models of transcription in human cells, with the goal of designing multi-factor gene therapies to reverse neurodegeneration.

Additional Information:

- **Website**
- **Resume**

Primary CSAIL Advisor:
Hari Balakrishnan

Degree/Role:
PhD

Graduation Date:
April 2026

Job Type:
Summer Internship 2024

Chenning Li

Contact Email: lichenni@csail.mit.edu

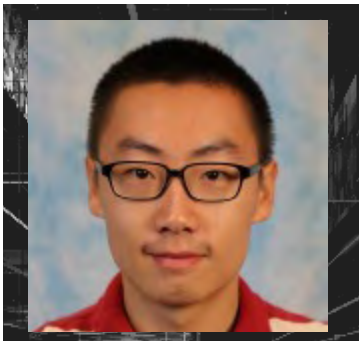
- **Research Category**: Networks; Systems
- **Research Area (specific)**: ML Systems, Wireless Networks
- **Research Group:** NMS
- **Primary Community of Research (CoR) at CSAIL**: Systems

Short Bio: He is a Ph.D. student in the Networks and Mobile Systems group at CSAIL, EECS, MIT, working with Prof. Hari Balakrishnan.

Description of Research/Thesis Topic: His research focuses on machine learning systems and wireless networks.

Additional Information:

- **Website**
- **Resume**



Primary CSAIL Advisor:
Julie Shah

Degree/Role:
PhD

Graduation Date:
June 2024

Job Type:
Full-Time Position

Shen Li

Contact Email: shenli@csail.mit.edu

- **Research Category**: Artificial intelligence, Algorithms, Machine Learning, Robotics
- **Research Area (specific)**: Human-Robot Collaboration
- **Research Group**: Interactive Robotics Group

Short Bio: Shen Li is a PhD student at MIT, advised by Professor Julie Shah. He works in the Interactive Robotics Group. Previously, he obtained his MS degree in Robotics at the Robotics Institute, CMU. He was a research assistant at the Personal Robotics Lab (now moved to UW), co-advised by Professor Siddhartha Srinivasa and Professor Stephanie Rosenthal. He also worked with Professor Katia Sycara in summer 2017. He obtained his BS degrees in Computer Science and Psychology from Penn State.

Description of Research/Thesis Topic: His research focuses on developing planning and learning algorithms to enable robots to safely and efficiently assist and collaborate with humans on physical tasks.

Additional Information:
- **Website**
- **Resume**

Primary CSAIL Advisor:
Dina Katabi

Degree/Role:
PhD

Graduation Date:
June 2024

Job Type:
Internship

Tianhong Li

Contact Email: tianhong@csail.mit.edu

- **Research Category**: Artificial intelligence, Machine Learning, Networks
- **Research Area (specific)**: Machine Learning in Wireless Network
- **Research Group**: Dina Katabi's Group

Short Bio: Tianhong Li is a first year PhD student at MIT CSAIL, under supervision of Professor Dina Katabi. Tianhong's research interests include machine learning and its application in wireless networks.

Description of Research/Thesis Topic: Tianhong's research interests include machine learning and its application in wireless networks.

Primary CSAIL Advisor:
Armando Solar-Lezama

Additional Advisor(s):
Regina Barzilay

Degree/Role:
Undergraduate/UROP

Graduation Date:
May 2025

Job Type:
IAP Internship Summer Internship

Zhening Li

Contact Email: zli11010@csail.mit.edu

- **Research Category**: AI;Machine Learning
- **Research Area (specific)**: Neurosymbolic learning
- **Research Group**:Computer-aided programming (CAP); Regina Barzilay Group (RBG
- **Primary Community of Research (CoR) at CSAIL**: Applied Machine Learning

Short Bio: Zhening Li is a third-year undergraduate student majoring in computer science and physics. Previously, he won gold medals at international physics and astronomy Olympiads. He is excited about applications of machine learning to math and science, and has worked with Prof. Armando Solar-Lezama on AI for math and Prof. Regina Barzilay on AI for chemistry.

Description of Research/Thesis Topic: Zhening is interested in applying machine learning to scientific modeling and discovery. He is particularly interested in the potential of using neurosymbolic AI systems--systems that have learnt symbolic components in addition to neural ones--to model science and discover new theories in ways that are interpretable and reliable.

With Prof. Armando Solar-Lezama, he has worked on learning symbolic high-level compositional skills for improving the performance of equation solving learning agents. With Dr. Yujie Qian in Prof. Regina Barzilay's lab, he has worked on information extraction, condition reaction recommendation, and retrosynthesis in the chemistry domain.

Additional Information:

- **Website**
- **Resume**

Primary CSAIL Advisor:
Amar Gupta

Degree/Role:
Undergraduate/UROP

Graduation Date:
May 2027

Job Type:
Summer Internship

Alicia Lin

Contact Email: ayl27@mit.edu

- **Research Category**: Algorithms;Systems
- **Research Area (specific)**: Document Processing

Short Bio: Class of 2027, majoring in 6-4 (Artificial Intelligence and Decision Making) and 18 (Mathematics). Born and raised in Austin TX. Research interests include AI and pure math. Outside of academia, interests include creative writing, digital art, and MIT's Asian Dance Team.

Additional Information:

- **Website**

Primary CSAIL Advisor:
Julian Shun

Degree/Role:
PhD

Graduation Date:
June 2026

Job Type:
Full Time Position

Junhong Lin

Contact Email:junhong@csail.mit.edu

- **Research Category**: AI;Algorithms;Machine Learning;Performance Engineering;Systems
- **Research Area (specific)**: Parallel Graph Algorithms and Frameworks; Graph Neural Network
- **Research Group**: Parallel Algorithms and Programming Group

Short Bio: Junhong is a 5th year PhD student at MIT in the Computer Science (EECS) department, with an interest in parallel graph algorithms. His advisor is Prof. Julian Shun. Currently a summer research intern at MIT-IBM Watson AI-Lab, where Junhong works with Yada Zhu on research about graph neural network.

Description of Research/Thesis Topic: Junhong's current research focuses on developing shared-memory parallel graph algorithms and design effective and efficient graph neural network to tackle real-world problem.

Additional Information:

- **Website**
- **Resume**

Primary CSAIL Advisor:
Michael Cafarella

Degree/Role:
Postdoctorate

Graduation Date:
November 2025

Job Type:
Full Time Position

Chunwei Liu

Contact Email: chunwei@csail.mit.edu

- **Research Category**: Systems
- **Research Area (specific)**: Database, Compound AI Systems
- **Research Group:** DSG
- **Primary Community of Research (CoR) at CSAIL**: Systems

Short Bio: Chunwei Liu is a Postdoctoral Associate at MIT CSAIL working with Michael Cafarella. He got his Ph.D. from Department of Computer Science at the University of Chicago, where he worked in ChiData group advised by Aaron Elmore. His broad research is primarily in distributed systems and databases. He is particularly interested in developing new compression techniques for data systems, adaptive compression selection for resource-constrained database and ML systems, and high dimensional data analysis for time series.

Description of Research/Thesis Topic: My research interests span diverse fields such as compound AI systems, database systems, cloud/edge computing, and time series analysis. My work focuses on LLM-driven knowledge management and model reuse, streamlining AI pipelines, designing innovative data compression methods for data systems, implementing adaptive compression selection in resource-constrained databases and machine learning systems, and conducting high-dimensional data analysis for time series applications.

Additional Information:

- **Website**

Primary CSAIL Advisor:
Vinod Vaikuntanathan

Degree/Role:
PhD

Graduation Date:
September 2024

Job Type:
Full Time Position

Jiahui Liu

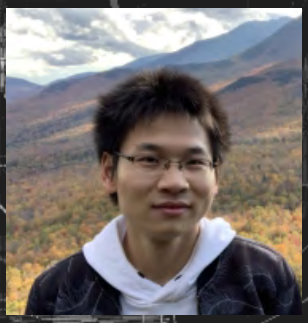
Contact Email: jiahui@csail.mit.edu

- **Research Category**: Complexity;Cryptography
- **Research Area (specific)**: quantum cryptography
- **Research Group:** Cryptography and Information Security Group
- **Primary Community of Research (CoR) at CSAIL**: Theory of Computation

Short Bio: Jiahui Liu is a postdoctoral researcher at Massachusetts Institute of Technology. She recently obtained her PhD degree in computer science from the University of Texas at Austin, under the supervision of Dr. Scott Aaronson. Her research interests are in the intersection of quantum computing and cryptography.

Description of Research/Thesis Topic: My research is in the intersection of quantum computing and cryptography, especially leveraging quantum information to build cryptographic protocols that have advantages over classical cryptographic protocols in terms of security and assumptions.

Additional Information:
- **Website**



Primary CSAIL Advisor:
Frédo Durand

Degree/Role:
PhD

Graduation Date:
July 2024

Job Type:
Summer Internship 2024

Yang Liu

Contact Email: yliu@csail.mit.edu

- **Research Category**: Artificial intelligence; Machine Learning; Vision & Graphics
- **Research Area (specific)**: Computational Imaging/Photography, Neural Rendering
- **Research Group**: Computer Graphics Group
- **Primary Community of Research (CoR) at CSAIL**: Visual Computing

Short Bio: Yang Liu is a fourth-year PhD student working on computational imaging/ photography with Professor Fredo Durand at MIT EECS & CSAIL. Prior to this, he received his Bachelor's and Master's degrees from Tsinghua University in 2016 and 2019, respectively.

Description of Research/Thesis Topic: He focuses on computational imaging and photography, which jointly design hardware (to optics level) and software (to compiler level) for high-dimensional (3D, high-speed, spectral, angular, et al.) or invisible (to human eyes) visual observations in macro- and micro-scale. Typical projects he works on can be categorized as high-dimensional visual computing from low-dimensional samplings, such as single-pixel imaging (from 1D photodiode signal to 2D image), snapshot compressive imaging (from a single coded 2D image to a video or hyperspectral images), neural microscopic fields (from a stack of angular microscopy images to a 3D video with uncompromised temporal resolution).

He is broadly interested in AI for accelerating scientific discovery and meeting social needs. He also works on revealing the imaging threat of ambient light sensors on everyday screens, which is capable of resolving an image of the scene in front of the screen without accessing the front camera, and designing a privacy-preserving subdermal barcode and a robust recognition system as vaccine record and beyond (general on-patient medical record).

Additional Information:
- **Website**
- **Resume**

Primary CSAIL Advisor:
Dina Katabi

Degree/Role:
PhD

Graduation Date:
June 2025

Job Type:
Internship

Yingcheng Liu

Contact Email: liuyingcheng@csail.mit.edu

- **Research Category**: Machine Learning, Networks, Vision & Graphics
- **Research Area (specific)**: Computer Vision and Machine Learning Application in Wireless Sensing
- **Research Group**: Dina Katabi's Group

Short Bio: Yingcheng Liu is a first-year PhD student working with Professor Dina Katabi. His research interest mainly lies in computer vision and its application in wireless sensing.

Description of Research/Thesis Topic: Yingcheng's research focuses on computer vision and its application in wireless sensing.

Additional Information:

- **Website**

Primary CSAIL Advisor:
Hari Balakrishnan

Additional Advisors:
Manya Ghobadi

Degree/Role:
PhD

Graduation Date:
June 2029

Job Type:
Summer Internship

Ziqian Liu

Contact Email: z229liu@mit.edu

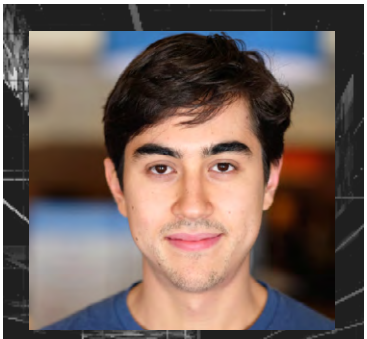
- **Research Category**: Networks;Systems
- **Research Area (specific)**: Computer and Wireless Network
- **Research Group:** Networks and Mobile Systems (NMS)
- **Primary Community of Research (CoR) at CSAIL**: Systems

Short Bio: Ziqian (Charlie) Liu is working on building computer systems and networks for better connectivity and higher performance by borrowing a variety of techniques from the different fields of computer science.

Description of Research/Thesis Topic: The current research is to bring connectivity to a city-scale wireless network during centralization failure.

Additional Information:

- **Website**



Primary CSAIL Advisor:
Daniel Jackson

Degree/Role:
PhD

Graduation Date:
May 2024

Job Type:
Internship

Geoffrey Litt

Contact Email: glitt@csail.mit.edu

- **Research Category**: Human-Computer Interaction (HCI), Languages & Verification
- **Research Area (specific)**: Programming Tools
- **Research Group**: Software Design Group

Short Bio: Before MIT, Geoffrey Litt was an early engineer at Panorama Education (YC S13), a data analytics startup for K-12 schools. Over five years, he helped grow Panorama into a leading platform used by over 9 million students. Now he is working on programming tools, at the intersection of HCI and PL.

Description of Research/Thesis Topic: Geoffrey is interested in new debugging interfaces and spreadsheet-inspired development environments, with a focus on usability for both professional software engineers and novice end users.

Additional Information:
- **Website**
- **Resume**

Primary CSAIL Advisor:
Wojciech Matusik

Degree/Role:
PhD

Graduation Date:
May 2030

Job Type:
Summer Internship

Alston Lo

Contact Email: alston@mit.edu

- **Research Category**: AI;Machine Learning
- **Research Area (specific)**: Machine Learning for Science
- **Research Group**: Computational Design and Fabrication Group
- **Primary Community of Research (CoR) at CSAIL**: Applied Machine Learning

Short Bio: Alston Lo is a first year PhD student. Previously, Alston received a HBSc degree from the University of Toronto. There, he was fortunate to be on co-op at Deep Genomics as a machine learning research intern. Alston also had the privilege of working with Professor Alán Aspuru-Guzik on structure elucidation from rotational spectra and string-based molecular representations, and Professor Roger Grosse on influence functions.

Description of Research/Thesis Topic: Alston is interested in the intersection of machine learning and the life sciences, with a focus on drug discovery and structure elucidation.

Additional Information:
- **Website**

Primary CSAIL Advisor:
Justin Solomon

Degree/Role:
PhD

Graduation Date:
May 2026

Job Type:
Internship

Artem Lukoianov

Contact Email: arteml@mit.edu

- **Research Category**: Machine Learning, Vision & Graphics
- **Research Area (specific)**: Deep 3D representations
- **Research Group**: Geometrical Data Processing
- **Primary Community of Research (CoR) at CSAIL**: Visual Computing

Short Bio: Artem is a first-year PhD student, working on problems of learnable 3D shapes representation, computer graphics, and vision. During his undergrad at the Moscow Institute of Physics and Technologies (MIPT), he developed a traffic sign recognition system for a self-driving bus and published several works on international conferences in Computer Vision. While obtaining a master's degree at Ecole Polytechnique Federale de Lausanne (EPFL) he created a fast physics-based rendering framework and developed an algorithm of differentiable ISO-surface extraction for Deep Implicit Fields.

Description of Research/Thesis Topic: Artem's wide research interest is Computer Vision and Machine Understanding. Currently, the main focus of his studies is on deep implicit representations and their different applications to 3D vision, graphics, physics-based optimization, etc.

Additional Information:

- **Website**
- **Resume**

"My team's main objective is to identify areas where there's been some rapid advance in machine learning —usually coming out of academia and industry labs — to continually enhance how we deliver more seamless, secure experiences to our customers."

-Bayan Bruss, Capital One

Primary CSAIL Advisor:
Wojciech Matusik

Additional Advisor(s):
Tomas Palacios

Degree/Role:
PhD

Graduation Date:
June 2024

Job Type:
Internship

Yiyue Luo

Contact Email: yiyueluo@csail.mit.edu

- **Research Category**: Human-Computer Interaction (HCI), Performance Engineering, Robotics
- **Research Area (specific)**: Tactile sensing, digital fabrication
- **Research Group**: Computation Design and Fabrication Group

Short Bio: Yiyue Luo is a third-year PhD working with Prof. Wojciech Matusik and Prof. Tomas Palacios. Before joining MIT, Yiyue received her BS in Materials Science and Engineering at University of Illinois Urbana-Champaign. Her work and research interests span tactile sensing, human-computer interaction, and advanced digital manufacturing.

Description of Research/Thesis Topic: Yiyue works on large-scale tactile sensing for human-environment interactions learning and robot manipulation. Her research also involves human-computer interaction, artificial intelligence, and digital manufacturing.

Additional Information:

- **Website**

Primary CSAIL Advisor:
Wojciech Matusik

Degree/Role:
PhD

Graduation Date:
June 2024

Job Type:
Full Time Position

Pingchuan Ma

Contact Email: pcma@csail.mit.edu

- **Research Category**: AI;Vision & Graphics
- **Research Area (specific)**: Computer Graphics
- **Research Group**: CDFG
- **Primary Community of Research (CoR) at CSAIL**: Embodied Intelligence

Additional Information:

- **Website**

Primary CSAIL Advisor:
Dylan Hadfield-Mene

Degree/Role:
PhD

Graduation Date:
June 2029

Job Type:
IAP Internship
Summer Internship

Rachel Ma

Contact Email: rachelm8@csail.mit.edu

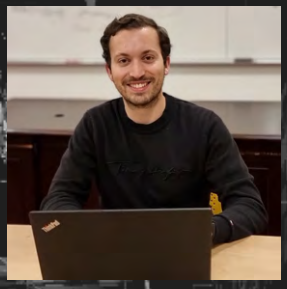
- **Research Category**: AI;Human Language;Robotics
- **Research Area (specific)**: Robotics with Natural Language Processing, Human Robot Interaction
- **Research Group**: Algorithmic Alignment Group
- **Primary Community of Research (CoR) at CSAIL**: Embodied Intelligence

Short Bio: Rachel Ma is currently a second year PhD student at MIT CSAIL in the Algorithmic Alignment group advised by Prof Dylan Hadfield-Menell. She previously graduated with a ScB with Honors in Computer Science and a AB with Honors in Music from Brown University. She was previously involved in the Humans2Robots Lab and the Intelligent Robotics Lab, advised by Profs George Konidaris and Stefanie Tellex, where she worked on various projects with drones, dancing robots, and robot skill generalization.

Description of Research/Thesis Topic: She is broadly interested in intersecting robotics with natural language to help with human robot interaction, robot learning, and human robot teams to help with bringing robots to help humans in the home and society.

Additional Information:

- **Website**



Primary CSAIL Advisor:
Tim Kraska

Additional Advisors:
Michael J Cafarella

Degree/Role:
PhD

Graduation Date:
December 2025

Job Type:
Summer Internship

Markos Markakis

Contact Email: markakis@mit.edu

- **Research Category**: Machine Learning;Systems
- **Research Area (specific)**: ML + Data Systems
- **Research Group:** Data Systems Group
- **Primary Community of Research (CoR) at CSAIL**: Systems

Short Bio: Markos Markakis is interested in enabling the efficient management of big data by designing novel high performance data systems. To that end, He is currently working towards a PhD at the intersection of data systems and machine learning as a member of the Data Systems Group at the Computer Science and Artificial Intelligence Lab (CSAIL) of the Massachusetts Institute of Technology. During his time at MIT, he has worked on projects with Prof. Tim Kraska, Prof. Michael Cafarella and Prof. Samuel Madden. He also interned at Intel as a Graduate Research intern in the summer of 2021, and at Amazon Web Services as an Applied Scientist intern in the summer of 2023. Before joining MIT, Markos earned his Bachelor's of Science in Engineering (B.S.E.) in Electrical Engineering from Princeton University, alongside a certificate (minor) in Applications of Computing. For an undergraduate thesis, he had the honor of working with Prof. Margaret Martonosi on efficient memory consistency testing, as well as on formal verification for the DECADES project.

Description of Research/Thesis Topic: Markos current research focuses on practical solutions for reliably enforcing performance-related service-level objectives (SLOs) in cloud databases. The migration of much of data processing to cloud databases has provided end users with significant advantages in terms of cost and flexibility. However, cloud database vendors remain reluctant to offer clear performance SLOs for their services, due to the complexity of estimating and enforcing such guarantees. Past efforts to tackle this problem generally suffer from stringent workload assumptions that limit their applicability. His thesis aims to develop a more practical alternative solution for this problem.

Additional Information:

- **Website**
- **Resume**

Primary CSAIL Advisor:
Regina Barzilay

Degree/Role:
PhD

Graduation Date:
June 2026

Job Type:
Full Time Position

Peter Mikhael

Contact Email: pgmikhael@csail.mit.edu

- **Research Category**: AI;Computational Biology
- **Research Area (specific)**: Clinical AI and Drug Discovery
- **Primary Community of Research (CoR) at CSAIL**: Applied Machine Learning

Short Bio: Peter Mikhael is a PhD student in EECS at MIT, advised by Prof. Regina Barzilay. He obtained a BSc in Mathematics and Chemistry from Duke in 2019. His undergraduate research was in computational cancer metabolism and focused on understanding the one-carbon (SGOC) metabolic network and the effect of dietary restriction.

Description of Research/Thesis Topic: His work at MIT has included developing computer vision models for cancer risk assessemnt. His current interests include therapeutic discovery through the application of AI to metabolism and biocatalysis.

Additional Information:

- **Website**

Primary CSAIL Advisor:
Marzyeh Ghassemi

Degree/Role:
PhD

Graduation Date:
May 2024

Job Type:
Full Time Position

Intae Moon

Contact Email: itmoon@csail.mit.edu

- **Research Category**: AI;Computational Biology;Machine Learning;Healthcare
- **Research Area (specific)**: Machine learning and healthcare
- **Research Group**: Healthy ML
- **Primary Community of Research (CoR) at CSAIL**: Vertical AI

Short Bio: Intae is a PhD candidate with expertise in machine learning and its applications in healthcare

Description of Research/Thesis Topic: Intae is interested in improving deployability of machine learning models by making them robust to real-world data issues such as missing data, heterogeneity, and dataset shifts in critical decision-making settings like healthcare. In terms of practical applications, the research involves developing machine learning-based approaches at the intersection of Electronic Health Records (EHR) and genomics data for improving clinical management of patients with cancer.

Additional Information:

- **Website**
- **Resume**

Primary CSAIL Advisor:
David Sontag

Degree/Role:
PhD

Graduation Date:
May 2024

Job Type:
Internship

Hussein Mozannar

Contact Email: mozannar@csail.mit.edu

- **Research Category**: Human-Computer Interaction (HCI), Machine Learning
- **Research Area (specific)**: Human-AI interaction
- **Research Group**: Clinical Machine Learning Group

Short Bio: Hussein Mozannar is a PhD student in Social & Engineering Systems and Statistics at MIT working in the Clinical Machine Learning Group. He received his undergraduate degree in computer engineering from the American University of Beirut.

Description of Research/Thesis Topic: Human-centric aspects of machine learning, namely how to integrate expert decision makers into machine learning pipelines while ensuring fairness and an understanding of long-term consequences.

Additional Information:

- **Website**
- **Resume**

Primary CSAIL Advisor:
David Karger

Degree/Role:
PhD

Graduation Date:
May 2024

Job Type:
Internship

Luke Murray

Contact Email: lsmurray@csail.mit.edu

- **Research Category**: Human-Computer Interaction (HCI)
- **Research Area (specific)**: Document Management Systems
- **Research Group**: Haystack

Short Bio: Luke Murray is a PhD candidate working in the Haystack Group with David Karger at CSAIL. His research interests include the annotated web, databases, and artificial intelligence. He hopes to use technology to create tools which enhance students' learning and studying experience. Luke was previously the undergraduate head of the Graphics Lab at Brown University where he helped developed NuSyS, a collaborative and shared workspace environment, and Dash, a Document IDE for knowledge work.

Description of Research/Thesis Topic: Luke is seeking to build flexible systems for managing documents and annotations. He plans on targeting these systems toward reducing friction in education and learning, and eventually hopes to create interactive and interconnected forms for publishing documents.

Additional Information:

- **Website**

Primary CSAIL Advisor:
Polina Golland

Degree/Role:
PhD

Graduation Date:
June 2029

Job Type:
Summer Internship

Ramya Muthukrishnan

Contact Email: ramyamut@mit.edu

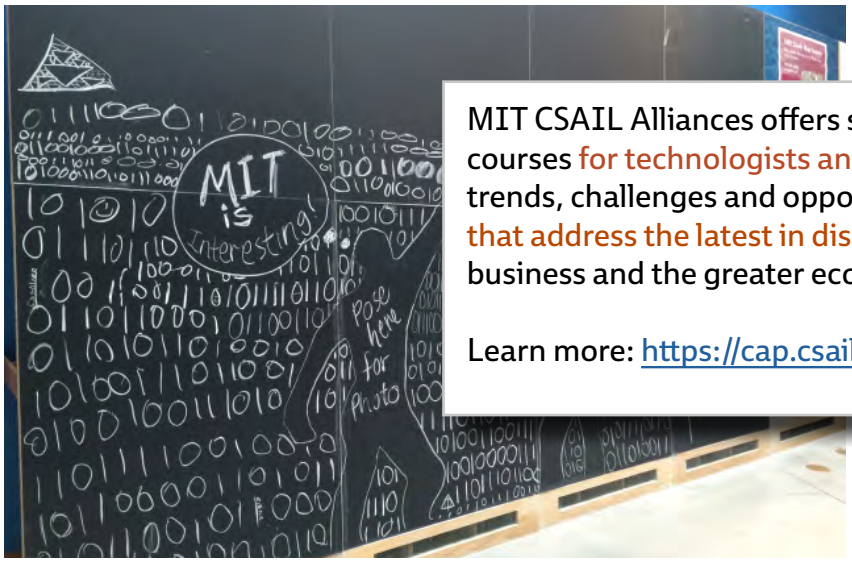
- **Research Category**: Vision & Graphics
- **Research Area (specific)**: computer vision for medical imaging
- **Research Group:** Medical Vision group
- **Primary Community of Research (CoR) at CSAIL**: Visual Computing

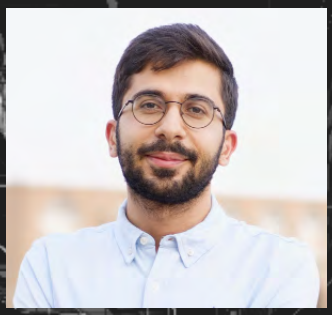
Short Bio: Ramya is a second-year PhD student at MIT CSAIL in Dr. Polina Golland's Medical Vision Group, where research focuses on motion tracking of the fetal brain from low-resolution volumetric MRI. Ramya is supported by the MIT Abdul Latif Jameel Fellowship for Machine Learning and Health Solutions and the Takeda Fellowship. Prior to starting her PhD, she obtained a bachelors and masters degrees in computer science from the University of Pennsylvania, during which she developed computer vision systems to solve problems in postsurgical epilepsy MRI and mammography.

Description of Research/Thesis Topic: Ramya Muthukrishnan's research focuses on equivariant neural networks for motion tracking in fetal brain MRI. Analysis of fetal images is often hampered by unavoidable fetal motion, resulting in spatial misalignment of the fetal brain between high-resolution anatomical 2D slices (images) combined into a volumetric scan of a fetal brain. This motion also introduces unintended gaps in spatial coverage of the brain, resulting in the loss of critical information for accurately monitoring brain development and identifying abnormalities, such as tumors and vascular malformations. She is developing an approach that relies on additional fast low-resolution, low-energy volumetric "navigator" scans acquired between every two anatomical slices to track the fetal head pose and to dynamically reorient the imaging plane. This approach promises to improve the alignment of slices within the scan and, consequently, brain coverage. Ramya proposes to implement this protocol by developing novel equivariant brain tracking algorithms from low-resolution fetal imaging with significant artifacts, enabling the scanner to adjust the imaging plane in real time. She is collaborating closely with physicians at the Boston Children's Hospital, led by Dr. Ellen Grant, to acquire and annotate real fetal images with this procedure, ensuring algorithm accuracy and clinical utility when her methods are deployed on a real scanner.

Additional Information:

- **Website**
- **Resume**





Primary CSAIL Advisor:
Mohammad Alizadeh

Degree/Role:
PhD

Graduation Date:
May 2025

Job Type:
Full Time Position

Arash Nasr-Esfahany

Contact Email: arashne@mit.edu

- **Research Category**: AI;Machine Learning;Networks;Systems
- **Research Area (specific)**: Modeling computer systems with causality and ML
- **Research Group**: NMS
- **Primary Community of Research (CoR) at CSAIL**: Systems

Short Bio: Arash is a PhD candidate at MIT CSAIL, advised by Mohammad Alizadeh. He has been the recipient of Jacobs Presidential Fellowship and Neekeyfar Fund Award. Before MIT, he did his undergrad in the Electrical Engineering department, Sharif University of Technology.
He spent the summer of 2022 as a research intern at Causality and Machine Learning group, Microsoft Research Redmond, working with Emre Kiciman. He has been a student researcher at Google since the summer of 2023.

Description of Research/Thesis Topic: Computer networks are an integral component of modern human life.For example, video conferencing, video streaming, and cloud computing, are all prevalent applications that rely on computer networks.
Modern computer networks depend on many control policies and resource management algorithms, e.g., congestion control protocols, data center schedulers, and cellular network scheduling policies, whose performance is critical for performance as well as user quality of experience. As a result, these algorithms have been subject to research and development for decades.
However, evaluating the real-world performance of new algorithms is challenging.
The gold standard is to run A/B tests or randomized control trials (RCT) in production systems.
However, RCTs are time-consuming, risk user disruptions, and require significant infrastructure that is available only to large system operators.

The research community typically resorts to simulators for assessing new ideas, but modern simulators have significant scalability and accuracy limitations.
For instance, even for relatively small data center network topologies, packet-level simulation is 3–4 orders of magnitude slower than real-time;
larger networks can easily take months or longer to simulate.
Instead, researchers often settle for modestly sized simulations and assume that performance translates to larger deployments, which sacrifices accuracy.
Alternatively, they rely on approximate techniques such as trace-driven simulation that is biased and can lead to wrong conclusions.

My PhD research focuses on developing fast and accurate simulators and models of networked systems using large-scale data. I develop systems and techniques that allow researchers to rapidly iterate on new ideas and test them under real conditions, leading to better performance, efficiency and user experience.

- **Website**
- **CV**

Primary CSAIL Advisor:
Dina Katabi

Degree/Role:
PhD

Graduation Date:
May 2025

Job Type:
Summer Internship

Michail Ouroutzoglou

Contact Email: michail@mit.edu

- **Research Category:** AI;Machine Learning;Healthcare
- **Research Area (Specific):** Machine Learning for Healthcare

Short Bio: Michail is a rising 5th year PhD student working with Prof. Dina Katabi. His research interests include machine learning, signal processing, and statistics, and he is currently focused on developing real world applications for digital healthcare.In his undergrad, he worked with Prof. Aggelos Bletsas at the Technical University of Crete (TUC) on developing industrial grade software defined radios for Gen2 RFIDs.

Description of Research/Thesis Topic: Michail's master's thesis was on quantifying nocturnal itch and its impact on sleep using machine learning and radio signals. In this work, he developed a novel neural network that can accurately measure a person's nocturnal scratching in a objective, sensitive, contactless, and privacy-preserving way. For his PhD, he is working on developing biomarkers and methods to track various other diseases.

Primary CSAIL Advisor:
Wojciech Matusik

Degree/Role:
Postdoctorate

Graduation Date:
June 2023

Job Type:
Full Time Position

Crystal Owens

Contact Email: crystalo@mit.edu

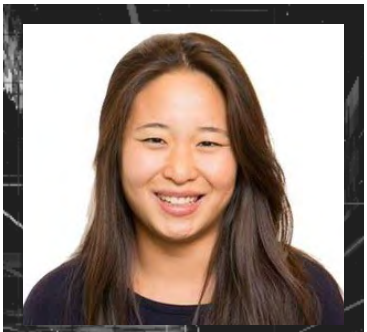
- **Research Category**: Vision & Graphics
- **Research Area (specific)**: Physics-Based Simulation
- **Research Group:** Computational Design and Fabrication Group (CDFG)
- **Primary Community of Research (CoR) at CSAIL**: Visual Computing

Short Bio: Crystal Owens is a distinguished postdoctoral fellow and previously received her PhD ('23) and MS ('17) from MIT in Mechanical Engineering where she studied fluid mechanics behind 3D printing, with a side research split into what is now known as "Oreology." She is originally from Iowa. Outside of research she is involved in MIT's Video Game Orchestra (playing cello) and MIT's Language Exchange (learning Italian).

Description of Research/Thesis Topic: As a postdoc, Dr. Owens is using computational methods to design novel acoustic self-assembly processes and acoustic holograms. She is also developing methods of measuring the flow properties of complex (non-Newtonian) fluids based only on visual input (ex. video) in order to better recreate the flow in simulations based on physics.

Additional Information:

- **Website**



Primary CSAIL Advisor:
Pulkit Agrawal

Degree/Role:
PhD

Graduation Date:
May 2025

Job Type:
Internship

Andi Peng

Contact Email: andipeng@csail.mit.edu

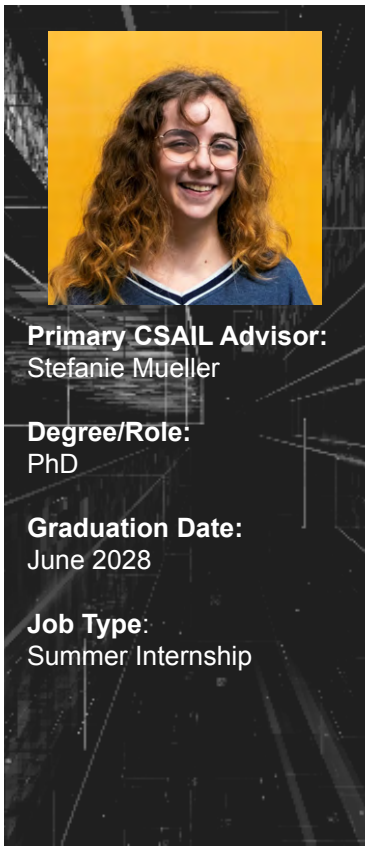
- **Research Category**: Artificial intelligence, Human-Computer Interaction (HCI), Robotics
- **Research Area (specific)**: Multi-agent reinforcement learning
- **Primary Community of Research (CoR) at CSAIL**: Embodied Intelligence

Short Bio: Andi is a first-year PhD student in CSAIL where her interests span from multi-agent reinforcement learning to general embodied intelligence. Prior to MIT, she was researching away at Microsoft Research (MSR AI) for two years, where she was an AI Resident working with the Adaptive Systems and Interaction Group. She received a BS in Cognitive Science and BA in Global Affairs from Yale, where she spent four wonderful years with Brian Scassellati.

Description of Research/Thesis Topic: Andi's work focuses on robots learning to work with humans.

Additional Information:

- **Website**
- **Resume**



Primary CSAIL Advisor:
Stefanie Mueller

Degree/Role:
PhD

Graduation Date:
June 2028

Job Type:
Summer Internship

Maxine Perronni-Scharf

Contact Email: max1@mit.edu

- **Research Category**: AI;Human Computer Interaction (HCI);Vision & Graphics
- **Research Area (specific)**: Computational Fabrication
- **Research Group:** HCI Engineering Group
- **Primary Community of Research (CoR) at CSAIL**: Visual Computing

Short Bio: Maxine is PhD student at MIT CSAIL doing research at the intersection of computational fabrication, computer graphics and AI, under the supervision of Prof. Stefanie Mueller. Previously, Maxine was an undergraduate at Dartmouth College, double majoring in Mathematics and in Computer Science and minoring in Digital Arts, and a fully-funded Computer Science master's student at Princeton University, where she was advised by Prof. Szymon Rusinkiewicz. She has also spent time at Adobe Research working on PBR Materials Research.
Maxine's research has been supported by the Adobe Women in Technology Scholarship, the Morningside Academy for Design MAD fellowship, and the MIT Viterbi Fellowship. She also serves as an executive member for WiGRAPH, the ACM Community Group for Women in Computer Graphics Research.

Description of Research/Thesis Topic: Maxine's current research focus is on advancing AI-driven methods for tackling the environmental challenges posed by 3D printing, a technology known for its high levels of waste and substantial carbon footprint. She aims to innovate in areas such as the design of eco-friendly materials, optimizing recycling in production, and discovering novel 3D-printable structures that enhance both performance and sustainability.

Additional Information:

- **Website**
- **Resume**

Primary CSAIL Advisor:
Yoon Kim

Additional Advisor(s):
Marzyeh Ghassemi

Degree/Role:
PhD

Graduation Date:
May 2027

Job Type:
IAP Internship

Isha Puri

Contact Email: ishapuri@mit.edu

- **Research Category**: AI;Human Language;Machine Learning
- **Research Area (specific)**: Natural Language Processing (NLP), Language Modeling (LMs), Reasoning and Code
- **Research Group**: Computation and Language
- **Primary Community of Research (CoR) at CSAIL**: Embodied Intelligence

Short Bio: Isha is a PhD student at MIT EECS and CSAIL where she is co-advised by Professor Yoon Kim and Professor Marzyeh Ghassemi. Her research focuses on building and studying language models that can learn to reason like humans, as well as deployable, robust, and ethical AI healthcare systems. She graduated with her B.A. in Applied Mathematics and Computer Science from Harvard University in 2023, where she was an HBS Technology Innovation Fellow. She currently holds the MIT Great Educators Fellowship and the National Science Foundation's Graduate Research Fellowship.

Description of Research/Thesis Topic: Her research focuses on building and studying language models that can learn to reason like humans, as well as deployable, robust, and ethical AI healthcare systems.

Additional Information:

- **Website**
- **Resume**

Primary CSAIL Advisor:
Yoon Kim

Degree/Role:
PhD

Graduation Date:
May 2027

Job Type:
Summer Internship 2024

Linlu Qiu

Contact Email: linluqiu@csail.mit.edu

- **Research Category**: Artificial intelligence; Machine Learning
- **Research Area (specific)**: Natural language processing
- **Research Group**: Marine Robotics Group

Short Bio: Linlu Qiu is a first-year EECS PhD student at MIT. Prior to that, Linlu was an AI resident at Google. Linlu graduated from Georgia Tech with a Master's in Computational Science and Engineering.

Description of Research/Thesis Topic: Natural language processing

Additional Information:

- **Website**

Primary CSAIL Advisor:
Alan Edelman

Degree/Role:
PhD

Graduation Date:
May 2027

Job Type:
Summer Internship

Utkrash R

Contact Email: utkarsh5@csail.mit.edu

- **Research Category**: Machine Learning;Performance Engineering
- **Research Area (specific)**: Scientific Machine Learning
- **Research Group:** Julia Lab
- **Primary Community of Research (CoR) at CSAIL**: Applied Machine Learning

Short Bio: Utkarsh is a first year PhD student at MIT, majoring in Computational Science and Engineering (CSE). He also received his Masters from MIT in CSE as well. He is currently co-advised by Prof. Alan Edelman and Dr. Chris Rackauckas at the Julia Lab, MIT CSAIL. Broadly, his research interests are in efficient numerical methods and their applications in Scientific Machine Learning. He completed his undergraduate studies from Indian Institute of Technology Kanpur, India. He has previously worked with Amazon Science and Samsung Research.

Description of Research/Thesis Topic: Utkarsh's research interests lies at the intersection of numerical methods and machine learning, where he develops performant algorithms on hardware accelerators to scale Scientific Machine Learning.

Additional Information:
- **Website**

Primary CSAIL Advisor:
Dylan Hadfield-Menell

Degree/Role:
Master's

Graduation Date:
May 2024

Job Type:
Full Time Position

Deepika Raman

Contact Email: deepikar@mit.edu

- **Research Category**: AI;Algorithms;Human Computer Interaction (HCI);Machine Learning
- **Research Area (specific)**: Participatory Methods for AI Benchmarking and Evaluation
- **Research Group:** Algorithmic Alignment Group
- **Primary Community of Research (CoR) at CSAIL**: Computing and Society

Short Bio: Deepika recently graduated with a Masters in the Technology and Policy Program at the Institute for Data, Systems, and Society in MIT's Schwarzman College of Computing. Her current research interests revolve around bridging the policy-practice gap in defining and operationalizing meaningful evaluation metrics to build trustworthy AI solutions. Before MIT, she led the policy teams for data governance and the national AI strategy at the Emerging Technologies Division at the Ministry of Electronics and IT, Government of India. She has an undergraduate degree in biomedical engineering and a postgraduate diploma in international relations from India.

Description of Research/Thesis Topic: Under the supervision of Dr. Dylan Hadfield-Menell, at MIT CSAIL's Algorithmic Alignment Group, she co-developed a community-centric tool and process to operationalize growing global AI policy calls for scalable, inclusive, and contextualized development and evaluation of AI applications. This method to derive community-relevant evaluation benchmarks was designed to develop use-case-specific metrics that meaningfully gauge the potential societal impact. It simultaneously served as a tool to empower vulnerable communities to negotiate their relationship with AI solutions to serve the agenda of 'designing with' not 'designing for' these communities.

Additional Information:
- **Website**
- **Resume**

Primary CSAIL Advisor:
Hal Abelson

Degree/Role:
PhD

Graduation Date:
May 2027

Job Type:
Summer Internship

Prerna Ravi

Contact Email: prernar@csail.mit.edu

- **Research Category**: AI;Human Computer Interaction (HCI)
- **Research Area (specific)**: AI for Education
- **Research Group**: MIT App Inventor
- **Primary Community of Research (CoR) at CSAIL**: Human-Computer Interaction

Short Bio: Prerna Ravi is a PhD student at MIT's Computer Science and Artificial Intelligence Laboratory (CSAIL) advised by Dr. Hal Abelson. Her research focuses on designing AI powered educational tools, curricula, and learning experiences that foster equity and creativity. Under MIT RAISE (Responsible AI for Social Empowerment and Education), she leads projects that leverage constructionism to democratize computing education, AI and data literacy and empower diverse K12 students and educators to responsibly engage in an AI-driven society. Her research has been supported by the Ida M. Green Memorial Fellowship, the MIT Work of the Future Fellowship, and the MIT Vice Chancellor's Inclusive Excellence Fellowship. She holds a B.S. in Computer Science from the Georgia Institute of Technology. During her time there, she led ethnographic studies with global non-profits investigating how underserved communities navigated digital resource constraints during the COVID-19 pandemic. She also developed inclusive educational games for deaf children in collaboration with Google's Perception team. Her work was recognized by Adobe Research Women-in-Technology Scholarship, ACM Student Research Competition, and Georgia Tech Outstanding Sophomore and Junior awards.

Description of Research/Thesis Topic: My research focuses on designing AI powered educational tools, curricula, and learning experiences that foster constructionism, equity and creativity. More specifically, I explore the interplay of social, cultural, economic, and digital infrastructures in historically marginalized contexts. Utilizing these insights, I develop assistive technologies and inclusive tools that empower people of all age groups and backgrounds to engage, learn, and create with AI and data science. I engage in ethnographic fieldwork, participatory design, system development, and evaluation.

- **Website**

MIT CSAIL has a long history of working closely with industry and government agencies and continues to fuel the growth of digital transformation in many sectors.

Primary CSAIL Advisor:
Daniela Rus

Additional Advisor(s):
Thomas Malone

Degree/Role:
Postdoctorate

Graduation Date:
September 2024

Job Type:
Full Time Position

Steven Rick

Contact Email: srick@csail.mit.edu

- **Research Category**: AI;Human Computer Interaction (HCI);Machine Learning
- **Research Area (specific)**: Collective Intelligence and Human-Centered Computing
- **Research Group**: Distributed Robotics Lab
- **Primary Community of Research (CoR) at CSAIL**: Applied Machine Learning

Short Bio: Steven is a Postdoctoral Research Associate in the Distributed Robotics Lab (MIT CSAIL) and Center for Collective Intelligence (MIT Sloan). He received his Ph.D. in Computer Science at UC San Diego, where his thesis work focused on capturing natural human behavior in situ and building systems that could make sense of non-verbal communication patterns in clinical environments. A practitioner of Human-Centered Design, Steven uses computing to support and augment human abilities to understand and solve problems.

Description of Research/Thesis Topic: Steven's research is currently centered around designing and evaluating systems that use the latest advancements in machine learning and artificial intelligence to augment creative problem-solving. His work explores how new technologies help and/or hinder problem exploration and solution generation. He is especially interested in how to bring together groups of humans and computational agents to effectively accomplish complex tasks.

Additional Information:

- **Website**

Primary CSAIL Advisor:
Alan Edelman

Degree/Role:
PhD

Graduation Date:
September 2027

Job Type:
Summer Internship

Evelyne Ringoot

Contact Email: eringoot@mit.edu

- **Research Category**: Performance Engineering;Systems;Accesibility
- **Research Area (specific)**: Numerical linear algebra for High-Perfornance Computing
- **Research Group**: JuliaLab
- **Primary Community of Research (CoR) at CSAIL**: Human-Computer Interaction

Short Bio: Evelyne Ringoot is a PhD student in the departments of Computational Science and Engineering and Mathematics at the Massachusetts Institute of Technology. She works in the Julialab with Professor Alan Edelman on High-Performance Computing (HPC) implementations for large-scale numerical linear algebra. She previously graduated with a MSc in Civil Engineering at the Vrije Universiteit Brussel/Université Libre de Bruxelles, was a visiting student at EPFL Lausanne and Ulsan UNIST, and has industry experience in management consulting.

Description of Research/Thesis Topic: Evelyne's research aims to increase HPC accessibility for all scientists. She focuses on High-Performance Computing GPU implementations for large-scale numerical linear algebra. While computer science has embedded itself in almost every scientific field, computational tools have not necessarily become easier to use throughout the advancement of High-Performance Computing field. Evelyne is currently developing a hardware-agnostic multi-scale Tiled Linear Algebra abstraction that enables scientists to take advantage of a less tedious software development process for testing new algorithms.

Additional Information:

- **Website**

Primary CSAIL Advisor:
Virginia Williams

Degree/Role:
PhD

Graduation Date:
June 2026

Job Type:
Internship

Caleb Robelle

Contact Email: robelle@csail.mit.edu

- **Research Category**: Algorithms & Theory, Complexity
- **Research Area (specific)**: Graph Sparsification & Compression Problems (MKTP/MCSP)
- **Primary Community of Research (CoR) at CSAIL**: Theory of Computation

Short Bio: Caleb Robelle is a first year PhD student in the theory group at CSAIL. He completed his undergraduate education at the University of Maryland, Baltimore County. He is broadly interested in graph algorithms and the complexity theory.

Description of Research/Thesis Topic: Caleb's previous work has centered on two different areas: graph sparsification and hardness of compression. In the first area he helped develop the first algorithms for constructing near-optimal (and eventually optimal) graph spanners. In the second area, he contributed to work that proved new hardness results for the Minimum KT Problem (MKTP).

Additional Information:

- **Website**

Primary CSAIL Advisor:
Andrew W. Lo

Degree/Role:
PhD

Graduation Date:
May 2026

Job Type:
Summer Internship

Jillian Ross

Contact Email: jillianr@mit.edu

- **Research Category**: AI;Machine Learning
- **Research Area (specific)**: LLMs / AI Alignment
- **Research Group:** Laboratory of Financial Engineering

Short Bio: Jillian is a 3rd year PhD student at the MIT Computer Science & Artificial Intelligence Lab (CSAIL), where she is a member of the Laboratory of Financial Engineering advised by Professor Andrew W. Lo. Jillian's research is supported by the MIT Presidential Fellowship and the Mathworks Engineering Fellowship. During the summers, Jillian spent time at Replicate (a series B start-up), Adobe Research (an industry research lab), and BlueCove Limited (a scientific asset manager). She has a SM in Computer Science from MIT and a BS in Computer Science and Philosophy from Columbia Engineering.

Description of Research/Thesis Topic: Jillian works on the economic alignment of large language models (LLMs). The research focuses on evaluating the capabilities of LLMs as agents and their impact within finance and economics. By addressing practical concerns about AI systems in a specific and complex context, she aims to make significant progress towards deploying these systems to solve a wide range of meaningful problems, from finance to healthcare, in the real world.

Additional Information:

- **Website**

Primary CSAIL Advisor:
Bonnie Berger

Degree/Role:
PhD

Graduation Date:
June 2027

Job Type:
Summer Internship

Shuvom Sadhuka

Contact Email: ssadhuka@mit.edu

- **Research Category**: AI;Computational Biology;Machine Learning
- **Research Area (specific)**: AI for decision-making, with applications to health
- **Primary Community of Research (CoR) at CSAIL**: Applied Machine Learning

Short Bio: Shuvom Sadhuka is a third-year PhD student working on responsible machine learning, especially as applied to health contexts. Shuvom has specific interests in decision-making, uncertainty quantification, and privacy.

Description of Research/Thesis Topic: Decision-making in sparse label settings

Primary CSAIL Advisor:
Bonnie Berger

Degree/Role:
PhD

Graduation Date:
June 2027

Job Type:
IAP Internship

Anna Sappington

Contact Email: asapp@csail.mit.edu

- **Research Category**: AI;Computational Biology;Machine Learning
- **Research Area (specific)**: Biologically-inspired machine learning models
- **Primary Community of Research (CoR) at CSAIL**: Applied Machine Learning

Short Bio: Anna graduated from MIT in 2019 with a B.S. in Computer Science and Molecular Biology (6-7). Anna conducted research on single cell RNA sequencing data for the Human Cell Atlas initiative and algorithms high-throughput sequence containment estimation for which Anna was awarded a Goldwater Scholarship. Anna then completed an MSc in Machine Learning at University College London and an MPhil in Genomic Medicine at Cambridge funded by a Marshall Scholarship. Anna returned to Boston in 2021 to join the Harvard/MIT MD-PhD Program; Anna has completed the first two years of medical school at Harvard Medical School and is now starting a PhD at MIT EECS.

Description of Research/Thesis Topic: Broadly, Anna is interested in building biologically-inspired computational algorithms and models for biomedical discovery. Similar to how robotics builds mimicry of different organisms into cutting-edge devices, aims to incorporate biological knowledge into our approaches for working with biomedical big data. For instance, building algorithms to learn fitness landscapes of evolving viral proteins that utilize knowledge of the underlying graphical structures of their sequence spaces. I'm also interested in graph representation learning of the 3D genome and improving tokenization of genomic sequence data. Finally, my medical training and clinical experience make me particularly interested in working on problems with real applications to scientific discovery about diseases and treatments as well as benefits to patients.

Additional Information:

- **Website**

Primary CSAIL Advisor:
Pulkit Agrawal

Degree/Role:
PhD

Graduation Date:
August 2027

Job Type:
Summer Internship

Bipsha Sen

Contact Email: bise@mit.edu

- **Research Category**: AI;Machine Learning;Robotics;Vision & Graphics
- **Research Area (specific)**: Imitation Learning, General-purpose Autonomy
- **Research Group:** Improbable AI
- **Primary Community of Research (CoR) at CSAIL**: Embodied Intelligence

Short Bio: Bipsha Sen is building robots that can come in your house and change the way you live!

Description of Research/Thesis Topic: What drives Bipsha's research is the idea of seeing robots become a commonplace - a part of our daily lives - imbibed with the ability to interact and manipulate the environment it lives in. In order to build such a generic enough robotic system that can perform most day-to-day tasks, scaling up the data needed to train them is, Bipsha believes, the primary challenge that we need to address in robotics. The approach to addressing this is rethinking - (1) the kind of data we should be collecting (i.e. the learning objective), and (2) the method of collecting this data (i.e. scalable hardware). Bipsha is building towards the these two directions and hoping to make data collection for robotic manipulation as seemless as possible! The approach to addressing this is rethinking - (1) the kind of data we should be collecting (i.e. the learning objective), and (2) the method of collecting this data (i.e. scalable hardware). Bipsha is building towards the these two directions and hoping to make data collection for robotic manipulation as seemless as possible!

Primary CSAIL Advisor:
Manolis Kellis

Degree/Role:
Undergraduate/UROP

Graduation Date:
May 2026

Job Type:
Summer Internship

Shabari Shankar

Contact Email: jshankar@mit.edu

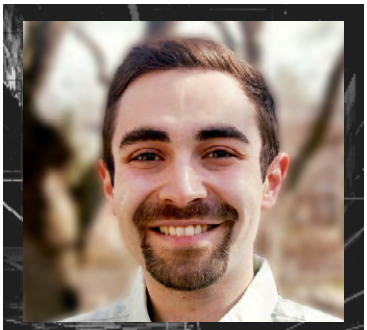
- **Research Category**: AI;Computational Biology;Human Language;Machine Learning
- **Research Area (specific)**: Evolutionary Biology Team

Short Bio: Shabari Shankar is an undergrad (graduating early, 2026) at MIT, studying computer science and molecular biology. She has been a UROP in Prof Kellis' Lab (Computational Biology group) for one year. Her past experience includes national ranking in biology olympiads in high school, recognition as an MIT School of Computing SERC scholar, IDEAS Startup Runner Up, Chevron Prize for standout science and engineering students, and Legatum Fellowship (generally only awarded to graduate students, for her startup using ML to optimize briquette making, more health and eco friendly forms of fuel made from waste materials such as cornhusk, groundnut shells, etc). Her past internship experience includes roles at NASA L'SPACE, Harvard's Beth Israel Medical Center, and MacPaw, the world's largest and most downloaded Apple Mac cleaner. She is a teaching assistant for MIT's Medlytics program for high schoolers (Medicine + Machine Learning). Outside technical fields, she is a News Editor with the Tech, MIT's student newspaper, and her letter to the editor was published in the New York Times.

Description of Research/Thesis Topic: I am a UROP in the Computational Biology group, in the evolution subgroup. I am working on analyzing rapidly evolving regions in the genome to understand how these changes affect brain development and function, using computational tools like Enformer to study chromatin accessibility and regulatory elements. This helps clarify the genetic basis of human-specific cognitive traits.

Additional Information:

- **Resume**



Primary CSAIL Advisor:
Justin Solomon

Degree/Role:
PhD

Graduation Date:
June 2026

Job Type:
Internship

Christopher Basil Scarvelis

Contact Email: scarv@mit.edu

- **Research Category**: Vision & Graphics
- **Research Area (specific)**: Optimal Transport
- **Research Group**: Geometric Data Processing Group

Short Bio: Christopher is a PhD candidate in Prof. Justin Solomon's Geometric Data Processing Group. He is broadly interested in geometric problems in machine learning, particularly at the intersection of computational optimal transport and large-scale optimization. Prior to arriving at MIT, Christopher received a joint honors BA in mathematics and economics at McGill University in Montreal.

Description of Research/Thesis Topic: Optimal transport provides a powerful toolkit for incorporating geometric information into algorithms for solving problems in machine learning and computer vision. Christopher's research concerns the application of techniques from optimal transport to large-scale problems in machine learning and the design of efficient algorithms for carrying out these computations.

Additional Information:

- **Website**

Primary CSAIL Advisor:
Leslie P. Kaelbling

Additional Advisors:
Tomás Lozano-Pérez

Degree/Role:
Undergraduate/UROP

Graduation Date:
February 2025

Job Type:
Full Time Position
Summer Internship

Benjamin Soria

Contact Email: bsoria@mit.edu

- **Research Category**: AI;Machine Learning;Robotics;Vision & Graphics
- **Research Area (specific)**: Reinforcement Learning
- **Research Group:** LIS
- **Primary Community of Research (CoR) at CSAIL**: Embodied Intelligence

Short Bio: Benjamin is a Senior anticipating starting their Master's program in 2025. He's interested in developing learning algorithms for robotics, enabling them to work alongside people and improve quality of life.

Description of Research/Thesis Topic: Language-conditioned Reinforcement Learning using synthetic demonstrations

Additional Information:

- **Website**
- **Resume**

Primary CSAIL Advisor:
Aleksander Madry

Degree/Role:
PhD

Graduation Date:
December 2026

Job Type:
Summer Internship 2024

Harshay Shah

Contact Email: harshay@mit.edu

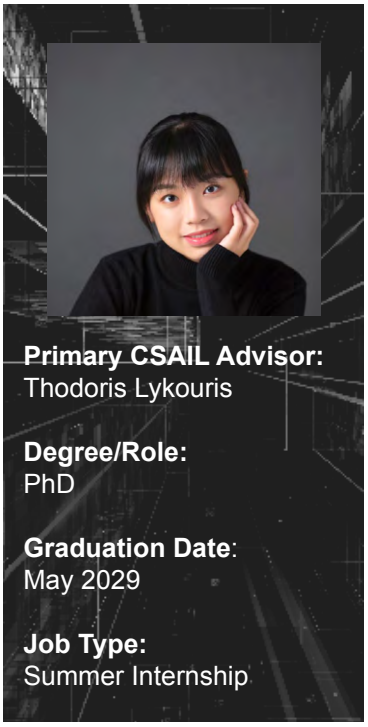
- **Research Category**: Artificial intelligence; Machine Learning
- **Research Area (specific)**: Reliable machine learning | MadryLab
- **Research Group at CSAIL**: MadryLab

Short Bio: Harshay is a first-year PhD student at MIT CSAIL, where he is advised by Aleksander Mądry. His research broadly focuses on reliable machine learning and is supported in part by the MIT Presidential Graduate Fellowship. Harshay graduated with a BS in Computer Science from the University of Illinois at Urbana-Champaign (UIUC) and has previously worked at Google Research and Microsoft Research.

Description of Research/Thesis Topic: Harshay's research focuses on reliable and interpretable machine learning.

Additional Information:

- **Website**



Primary CSAIL Advisor:
Thodoris Lykouris

Degree/Role:
PhD

Graduation Date:
May 2029

Job Type:
Summer Internship

Junxuan Shen

Contact Email: junxuan@mit.edu

- **Research Category**: Algorithms;Machine Learning
- **Research Area (specific)**: Online algorithms
- **Primary Community of Research (CoR) at CSAIL**: Applied Machine Learning

Short Bio: Junxuan Shen is a first year PhD student working on provable online algorithms with human feedback, advised by Prof. Thodoris Lykouris. Before MIT, she completed her B.S. in computer science and mathematics at Caltech.

Description of Research/Thesis Topic: Currently, they are working on designing algorithms for content moderation on social media. They want to utilize the accuracy human reviewers and the speed of AI reviewers, to design algorithms that are both accurate and efficient. During undergrad, Junxuan did research on learning-augmented algorithms, which is to combine untrusted AI advice with traditional algorithms, in the settings of dynamical systems and metrical task systems.

Additional Information:

- **Resume**

Primary CSAIL Advisor:
Cheng-Zhi Anna Huang

Degree/Role:
PhD

Graduation Date:
May 2028

Job Type:
Summer Internship

Nithya Shikarpur

Contact Email: snnithya@mit.edu

- **Research Category**: AI;Human Computer Interaction (HCI);Machine Learning;Music Generation, AI for creativity
- **Research Area (specific)**: Generative modeling for interactive music systems
- **Primary Community of Research (CoR) at CSAIL**: Applied Machine Learning

Short Bio: Nithya Shikarpur is a first-year PhD student at MIT advised by Prof. Cheng-Zhi Anna Huang. She is interested in the modeling of human-AI interactive systems for music creation, especially for low-resource genres of music. Earlier she was at Université de Montréal and Mila for her M.Sc. where she worked with Prof. Cheng-Zhi Anna Huang, where she developed a generative model for Hindustani vocal music and studied human-AI interaction through a user study. She is also a practitioner and performer of Hindustani classical vocal music and draws on this knowledge to further her research projects.

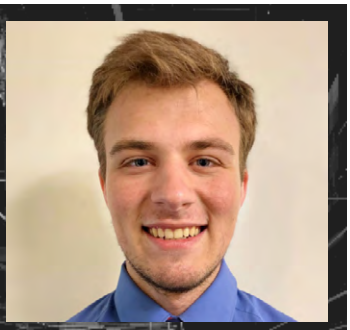
Description of Research/Thesis Topic: Through the course of her PhD, Nithya is looking forward to contributing further to the spaces of generative modeling in the audio domain, especially for non-Eurocentric forms of music, and using elements of Human-Computer Interaction to gauge the quality of the model for interaction and planning for future directions for her projects. She is interested in tools that enhance human creativity and make various music cultures more accessible to the human population.

Additional Information:

- **Website**
- **Resume**

Opportunities to engage with CSAIL:

- Alliances Program
- Research Initiatives
- Visiting Researchers
- Student Recruiting
- Student Fellowships
- Sponsored Research
- Technology Transfer:
  Open Source or TLO License
- Startups
- Learning: Talent Development Courses



Primary CSAIL Advisor:
Bonnie Berger

Degree/Role:
PhD

Graduation Date:
May 2024

Job Type:
Internship

Samuel Sledzieski

Contact Email: samsl@csail.mit.edu

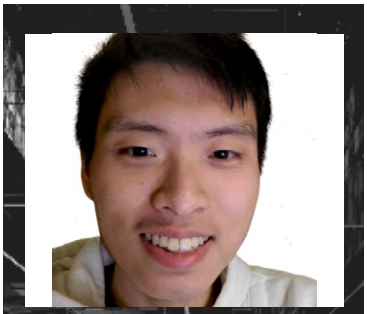
- **Research Category**: Algorithms & Theory, Computational Biology, Machine Learning
- **Research Area (specific)**: Systems Biology, Protein Interaction, Regulatory Networks
- **Research Group**: Computation and Biology
- **Primary Community of Research (CoR) at CSAIL**: Applied Machine Learning

Short Bio: Samuel Sledzieski is a fourth year PhD student PhD student in Bonnie Berger's Computation and Biology Group. He received an SM in Computer Science from MIT in 2021, supervised by Bonnie Berger. He received a BS in Computer Science from the University of Connecticut, and worked on viral transmission phylogenies with Dr. Mukul Bansal.

Description of Research/Thesis Topic: Sam is currently working on the development of new machine learning methods and network algorithms to predict protein-protein interactions and drug-target interactions across both model and non-model organisms, specifically focusing on the application of large protein language models

Additional Information:

- **Website**



Primary CSAIL Advisor:
Wojciech Matusik

Degree/Role:
PhD

Graduation Date:
May 2028

Job Type:
Summer Internship

Michael Sun

Contact Email: msun415@csail.mit.edu

- **Research Category**: AI;Machine Learning;Vision & Graphics
- **Research Area (specific)**: AI for Design
- **Primary Community of Research (CoR) at CSAIL**: Applied Machine Learning

Short Bio: Research interests span machine learning over interconnected structures and systems. Michael enjoys working with domain experts to enable transformative applications.

Description of Research/Thesis Topic: Michael Sun's interest is in span machine learning over interconnected structures and systems. He enjoys working with domain experts to enable transformative applications. He states: "I want to apply AI in designing better things — molecules, social networks, materials, buildings, etc. — by learning to reverse engineer existing ones. He wants to have an all-in-one platform with solutions for inverse design, search and optimization for experts across many domains that work from big datasets to real-world cases with few samples. He believes AI that designs things better than us will be the last invention we ever need."

Additional Information:

- **Website**
- **Resume**

Primary CSAIL Advisor:
Stefanie Jegelka

Degree/Role:
PhD

Graduation Date:
August 2025

Job Type:
Full-Time Position 2025

Behrooz Tahmasebi

Contact Email: bzt@mit.edu

- **Research Category**: AI;Machine Learning
- **Research Area (specific)**: Deep Learning
- **Primary Community of Research (CoR) at CSAIL:** Vertical AI

Short Bio: Ph.D. student in EECS at MIT and a student member of CSAIL advised by Prof. Stefanie Jegelka. Behrooz is interested in deep learning theory (optimization, generalization), learning with graphs/manifolds/invariances, and Large Language Models (LLMs) foundations.

Description of Research/Thesis Topic: Deep learning (optimization, generalization), learning with graphs/manifolds/invariances, and Large Language Models (LLMs) foundations.

Additional Information:

- **Website**
- **Resume**

"We find CSAIL's environment to be very friendly to companies that are based in other parts of the world, making us feel like we are able to take advantage of most of the benefits of the CSAIL Alliance Program."

-Sanjeev Vohra, Accenture

Primary CSAIL Advisor:
Manolis Kellis

Degree/Role:
Postdoctorate

Graduation Date:
June 2025

Job Type:
Full Time Position
Summer Internship

Yosuke Tanigawa

Contact Email: tanigawa@mit.edu

- **Research Category**: AI;Computational Biology
- **Research Area (specific)**: Precision Medicine

Short Bio: Yosuke Tanigawa, PhD, is a postdoctoral research scientist at MIT's Computer Science and Artificial Intelligence Lab. To incorporate interindividual differences in disease prevention and treatment, he develops computational and statistical methods, focusing on predictive modeling with high-dimensional human genetics data, multi-omic dissection of disease heterogeneity, and therapeutic target discovery. His recent works focus on inclusive training strategies for genetic prediction algorithms and dissecting the molecular, cellular, and genetic basis of phenotypic heterogeneity in Alzheimer's disease. He received many awards, including the Charles J. Epstein Trainee Awards for Excellence in Human Genetics Research and MIT Technology Review's Innovators Under 35 Japan.

Description of Research/Thesis Topic: Dr. Tanigawa develops statistical and computational methods for precision medicine, focusing on the following areas:

1) For therapeutic target discovery, he analyzes human genetics data from large-scale cohorts. For example, he led a study and nominated ANGPTL7 as an attractive therapeutic target for glaucoma, given that carriers of rare genetic variants in the gene have a ~34% risk reduction.

2) For disease heterogeneity dissection, he jointly analyzes multiple diseases and relevant phenotypes to nominate cellular, molecular, and genetic basis of interindividual differences in disease. He focuses on Alzheimer's disease in an ongoing project, where he integrates multidimensional phenotypic data with single-cell RNA-seq profiling data of 1.9 million cells, nominating transcriptional hallmarks in Alzheimer's disease.

3) For Polygenic prediction of human disease and medically relevant traits, he leads methodology development and large-scale applications to realize genomics-informed precision medicine. Recently, he developed an inclusive polygenic score training approach and substantially improved predictive accuracy by analyzing individuals across the continuum of genetic ancestry.

Together, he aims to aid early detection and prevention of the disease and help tailor therapeutic intervention based on individuals' genetic profiles.

Learn more about his research at: https://www.youtube.com/watch?v=kprOBq1qyNs

Additional Information:

- **Website**
- **Resume**

Primary CSAIL Advisor:
Wojciech Matusik

Degree/Role:
PhD

Graduation Date:
March 2025

Job Type:
Full Time Position

Yunsheng Tian

Contact Email: yunsheng@mit.edu

- **Research Category**: AI;Robotics;Vision & Graphics
- **Research Area (specific)**: Robot learning, planning and manipulation; Black-box optimization
- **Primary Community of Research (CoR) at CSAIL**: Embodied Intelligence

Short Bio: Yunsheng Tian is a final-year PhD student in the Computational Design & Fabrication Group at MIT CSAIL advised by Prof. Wojciech Matusik, working on robotics and machine learning. He obtained his bachelor's degree at Nankai University and worked as a research intern at MIT-IBM Watson AI Lab, Autodesk Research, The University of Hong Kong, and Microsoft Research Asia.

Description of Research/Thesis Topic: Yunsheng's research focuses on two main directions: 1) Building robotic manipulation systems that generalize to diverse objects in complex industrial/household tasks, leveraging the power of physical simulation, planning, and learning; 2) Developing data-efficient global optimizers involving multiple unknown objectives and constraints for general real-world applications. For both directions, he is actively working on scaling up data collection and using foundation models for further improving performance and generalizability.

Additional Information:
- **Website**

Primary CSAIL Advisor:
Arvind

Additional Advisors:
Tushar Krishna

Degree/Role:
PhD

Graduation Date:
June 2026

Job Type:
Full Time Position
Summer Internship

Jianming Tong

Contact Email: jianming@csail.mit.edu

- **Research Category**: Systems
- **Research Area (specific)**: computer architecture
- **Research Group:** System Research Group
- **Primary Community of Research (CoR) at CSAIL**: Systems

Short Bio: Jianming Tong is a PhD candidate at Georgia Tech, under the guidance of Dr. Tushar Krishna. His primary research area is Computer Architecture with major interest on software(MLSys'24)-system(MLSys'23, IEEE Micro'23)-hardware(ISCA'24) full-stack optimizations for privacy-preserving and performance-oriented AI workloads, i.e. make both AI and privacy-preserving AI faster and more efficient. He has an extensive prototype experience on both ASICs (TOC, TVLSI, GLSVLSI) and FPGAs (FPT, SC) and internships at Alibaba DAMO Academy, Pacific Northwest National Lab and Rivos. His research is recognized by Qualcomm Innovation Fellowship.

Description of Research/Thesis Topic: Accelerating always-secure computation and privacy-preserving machine learning

Additional Information:
- **Website**
- **Resume**

Primary CSAIL Advisor:
Armando Solar-Lezama

Additional Advisor(s)
Wojciech Matusik

Degree/Role:
PhD

Graduation Date:
June 2027

Job Type:
Summer 2024 Internship

Megan Tjandrasuwita

Contact Email: megantj@csail.mit.edu

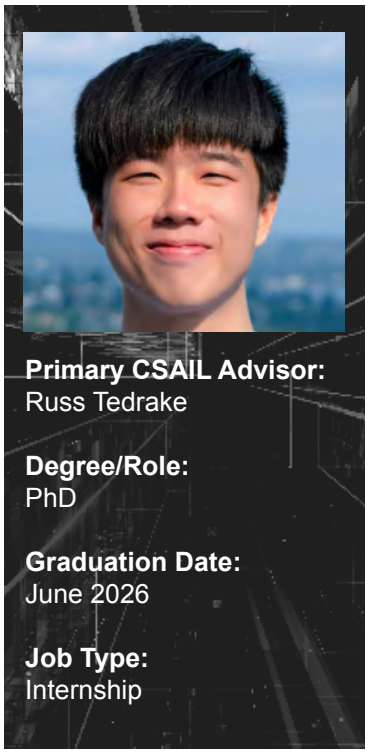
- **Research Category**: Artificial intelligence; Machine Learning
- **Research Area (specific)**: Neurosymbolic machine learning (combining deep learning with symbolic programs)
- **Research Group:** Computer Assisted Programming Group, Computational Fabrication and Design Group

Short Bio: Megan Tjandrasuwita is a PhD student in Computer Science at MIT who started in September 2022. Megan received a Bachelor's degree in Computer Science from Caltech, where she researched program synthesis for behavioral neuroscience applications as part of Prof. Yisong Yue's machine learning group. Megan is currently co-advised by Prof. Armando Solar-Lezama and Prof. Wojciech Matusik, and she works on combining deep learning with symbolic programs.

Description of Research/Thesis Topic: Combining deep learning and symbolic programs with applications to science, robotics, graphics, and more.

Additional Information:

- **Website**



Primary CSAIL Advisor:
Russ Tedrake

Degree/Role:
PhD

Graduation Date:
June 2026

Job Type:
Internship

Lirui Wang

Contact Email: liruiw@csail.mit.edu

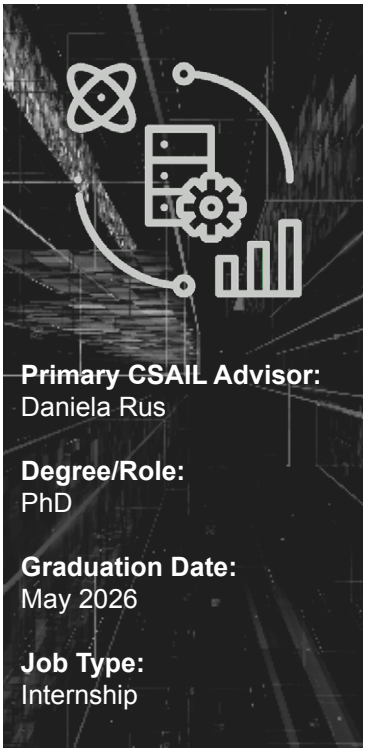
- **Research Category**: Artificial intelligence, Machine Learning, Robotics, Vision & Graphics
- **Research Area (specific)**: Robot Learning
- **Research Group**: Robot Locomotion Group
- **Primary Community of Research (CoR) at CSAIL**: Embodied Intelligence

Short Bio: Lirui Wang is a first-year PhD student advised by Prof. Russ Tedrake at the MIT Computer Science and Artificial Intelligence Laboratory (MIT CSAIL). Before coming to MIT, he received his B.S. and M.S. degrees at the University of Washington where he was very fortunate to work with Prof. Dieter Fox and collaborate with NVIDIA.

Description of Research/Thesis Topic: Lirui's research interest lies in the intersection of Robotics and Machine Learning. In particular, he is interested in developing algorithms and systems that can generalize and adapt in the complex and unstructured real-world environments.

Additional Information:

- **Website**
- **Resume**



Primary CSAIL Advisor:
Daniela Rus

Degree/Role:
PhD

Graduation Date:
May 2026

Job Type:
Internship

Tsun-Hsuan Wang

Contact Email: tsunw@mit.edu

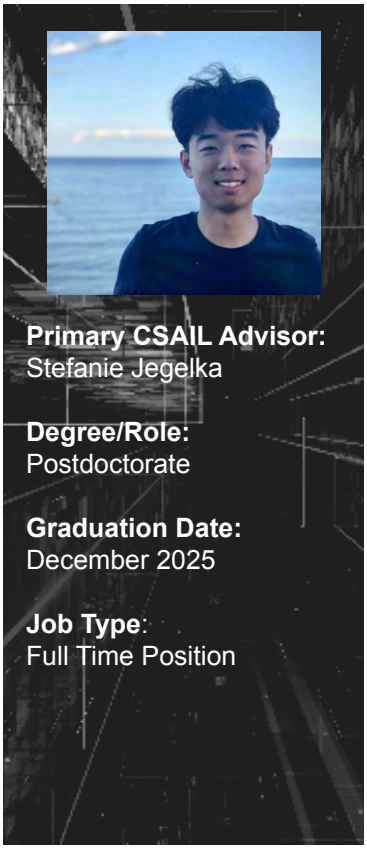
- **Research Category**: Robotics, Vision & Graphics
- **Research Area (specific)**: Robotics and Computer Vision
- **Research Group**: Distributed Robotics Lab (DRL)
- **Primary Community of Research (CoR) at CSAIL**: Embodied Intelligence

Short Bio: Tsun-Hsuan Wang is a first-year PhD at MIT CSAIL. Prior to that, he did an internship at Uber ATG on self-driving. He received both his master's and bachelor's degree at National Tsing Hua University, Taiwan, majoring in electrical engineering.

Description of Research/Thesis Topic: Tsun-Hsuan's research mainly lies in the intersection between perception, planning/control, and learning.

Additional Information:

- **Website**



Primary CSAIL Advisor:
Stefanie Jegelka

Degree/Role:
Postdoctorate

Graduation Date:
December 2025

Job Type:
Full Time Position

Yifei Wang

Contact Email: yifei_w@mit.edu

- **Research Category**: AI;Machine Learning
- **Research Area (specific)**: Self-supervised Learning, Alignment, Neural Representations
- **Research Group:** Jegelka Group
- **Primary Community of Research (CoR) at CSAIL**: Applied Machine Learning

Short Bio: Yifei Wang is a postdoc at MIT CSAIL, working with Prof. Stefanie Jegelka. Prior to that, he obtained his PhD from Peking University. He is broadly interested in machine learning and representation learning, with a focus on bridging the theory and practice of self-supervised learning. His first-author work has been recognized by the Best ML Paper Award of ECML-PKDD 2021, the Silver Best Paper Award of ICML 2021 AdvML workshop, and the Spotlight Award of ICML 2024 ICL Workshop. He serves as an Area Chair for ICLR 2024 and 2025.

Description of Research/Thesis Topic: Self-supervised Learning, Alignment, Neural Representations

Additional Information:

- **Website**

Primary CSAIL Advisor:
John Guttag

Additional Advisors:
Adrian Dalca

Degree/Role:
PhD

Graduation Date:
May 2026

Job Type:
Internship

Hallee Wong

Contact Email: hallee@mit.edu

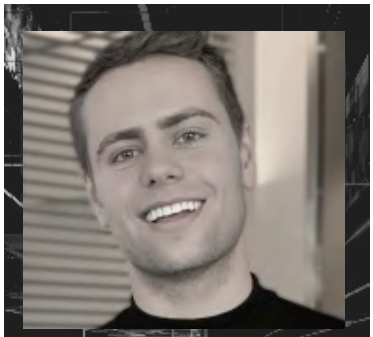
- **Research Category**: AI;Human Computer Interaction (HCI);Machine Learning; Vision & Graphics
- **Research Area (specific)**: Medical Image Analysis
- **Research Group**: Clinical and Applied Machine Learning Group
- **Primary Community of Research (CoR) at CSAIL**: Applied Machine Learning

Short Bio: Hallee is a fifth year EECS PhD student working on deep learning and computer vision with applications to medical image analysis. Previously, she graduated from Williams College with a BA in Mathematics and worked in health economics and outcomes research at Analysis Group, an economic consulting firm.

Description of Research/Thesis Topic: Hallee's research focuses on developing interactive AI systems and promptable foundation models that enable users to analyze (medical) images more efficiently. Previously, she developed ScribblePrompt, an interactive segmentation system that enables users to segment any region of a biomedical image using a few interactions, such as clicks, bounding boxes and/or scribbles. Currently, she is developing systems that enable the rapid annotation and analysis of entire datasets with in-context learning.

Additional Information:

- **Website**
- **Resume**



Primary CSAIL Advisor:
Arvind Satyanarayan

Degree/Role:
PhD

Graduation Date:
December 2025

Job Type:
Internship

Dylan Wootton

Contact Email: dwootton@mit.edu

- **Research Category**: Artificial intelligence, Computational Biology, Human-Computer Interaction (HCI)
- **Research Area (specific)**: Interactive Data Visualization
- **Research Group**: MIT Visualization Lab
- **Primary Community of Research (CoR) at CSAIL**: Human-Computer Interaction

Short Bio: Dylan is a PhD student working on Interactive Data Visualization at MIT's Visualization Group. Previously, he developed visualization and analytics services at Microsoft which senior leaders used to make product release and strategic roadmap decisions, processing telemetry data from over 1B devices. Combined with his past work in making big data more actionable to end users, Dylan also has an extensive background in the life sciences. Having conducted synthetic biology research and worked at Genentech, Dylan is interested in combining these fields to help advance healthcare and the life sciences.

Description of Research/Thesis Topic: Dylan's research focuses on interactive data visualization.

Additional Information:

- **Website**

Primary CSAIL Advisor:
Manolis Kellis

Additional Advisors:
Leandro Agudelo

Degree/Role:
Undergraduate/UROP

Graduation Date:
May 2026

Job Type:
Summer Internship

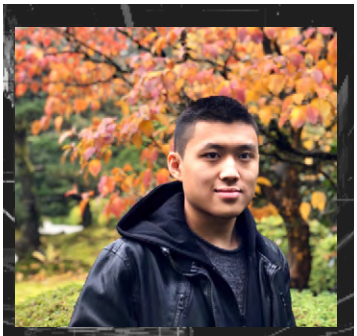
Kevin Wu

Contact Email: kjwu@mit.edu

- **Research Category**: AI;Computational Biology
- **Research Area (specific)**: Applying GNNs to knowledge graphs to understand perturbations in cells
- **Primary Community of Research (CoR) at CSAIL**: Applied Machine Learning

Short Bio: Kevin Wu is a UROP student at CSAIL. He has a background in math and is planning to specialize in theoretical computer science and AI research. This year, he worked on a UROP with Leandro Agudelo in the Kellis Lab focusing on understanding the relations between genes using GNNs.

Description of Research/Thesis Topic: We apply GNNs to knowledge graphs to understand perturbations in cells with the goal of understanding how cell phenotypes change when protein levels shift.



Primary CSAIL Advisor:
Yoon Kim

Degree/Role:
PhD

Graduation Date:
May 2027

Job Type:
Summer Internship 2024

Zhaofeng Wu

Contact Email: zfw@csail.mit.edu

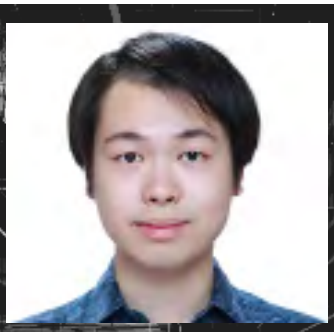
- **Research Category**: Artificial intelligence; Human Language; Machine Learning
- **Research Area (specific)**: Natural Language Processing
- **Primary Community of Research (CoR) at CSAIL**: Embodied Intelligence

Short Bio: Zhaofeng Wu is a PhD student in the NLP group at MIT CSAIL. He has also done NLP research at the University of Washington, where he obtained his M.S. in computer science, B.S. in computer science, and B.A. in linguistics, and at the Allen Institute for Artificial Intelligence (AI2). He has also worked on machine learning and NLP problems in the industry when he interned at Google, Meta, etc.

Description of Research/Thesis Topic: Natural language processing (NLP)

Additional Information:

- **Website**



Primary CSAIL Advisors:
Samuel Madden and Tim Kraska

Degree/Role:
PhD

Graduation Date:
September 2026

Job Type:
Internship

Ziniu Wu

Contact Email: ziniuw@mit.edu

- **Research Category**: Machine Learning, Systems
- **Research Area (specific)**: Machine learning for Database
- **Research Group**: Data system group
- **Primary Community of Research (CoR) at CSAIL**: Systems

Short Bio: Ziniu Wu is a first year PhD student in data system lab, co-advised by Dr. Sam Madden and Dr. Tim Kraska. Before coming to MIT, he completed bachelor's degree from CMU, master's degree from Oxford University, and one year work experience as a researcher at Alibaba Damo Academy.

Description of Research/Thesis Topic: Ziniu Wu focuses on applying machine learning techniques to database management systems. Specifically, he worked on learned query optimizers in DBMS. His works include building Bayesian cardinality estimation framework, designing new probabilistic graphical for cardinality estimation, benchmarking cardinality estimation, applying reinforcement learning techniques for join order selection, and unified transferable model for query optimizers.

Primary CSAIL Advisor:
Marzyeh Ghassemi

Degree/Role:
PhD

Graduation Date:
May 2027

Job Type:
Internship

Yuxin Xiao

Contact Email: yuxin102@csail.mit.edu

- **Research Category**: Artificial intelligence; Machine Learning
- **Research Area (specific)**: Machine Learning Fairness, Robustness, and Out-Of-Distribution Generalization
- **Primary Community of Research (CoR) at CSAIL**: Applied Machine Learning

Short Bio: Yuxin Xiao is a Ph.D. student at MIT IDSS and affiliated with the Healthy ML group at MIT CSAIL. Yuxin obtained his M.S. in Machine Learning at Carnegie Mellon University and his B.S. in Computer Science and B.S. in Statistics and Mathematics at the University of Illinois at Urbana-Champaign.

Description of Research/Thesis Topic: Yuxin's research focuses on developing fair and robust machine learning models that are aware of the uncertainty in structured data and generalize well out-of-distribution, with applications to the domain of healthcare.

Additional Information:
- **Website**
- **Resume**

Primary CSAIL Advisor:
Piotr Indyk

Degree/Role:
PhD

Graduation Date:
May 2027

Job Type:
Summer Internship 2024

Haike Xu

Contact Email: haikexu@csail.mit.edu

- **Research Category**: Algorithms & Theory; Machine Learning
- **Research Area (specific)**: Theoretical Computer Science
- **Primary Community of Research (CoR) at CSAIL**: Theory of Computation

Short Bio: First-year Ph.D. student at MIT EECS

Description of Research/Thesis Topic: Learning augmented algorithms

Primary CSAIL Advisor:
Manolis Kellis

Degree/Role:
Undergraduate/UROP

Graduation Date:
May 2027

Job Type:
Summer Internship

Anna Yang

Contact Email: anna_y@mit.edu

- **Research Category**: AI;Algorithms;Computational Biology;Machine Learning
- **Research Area (specific)**: Single cell genomics
- **Research Group:** Computational Biology

Short Bio: Anna Yang is second year student studying computer science and biology (course 6-7). Anna is interested in developing machine learning and other computational methods and applying them in a biological context.

Description of Research/Thesis Topic: Anna is currently a UROP student in the Comp Bio group, studying the interplay between obesity and neurodegenerative disease on a single-cell level. She also researching protein interaction networks and drug-target binding.

Additional Information:

- **Resume**

Primary CSAIL Advisor:
Phillip Isola

Additional Advisor(s):
Bill Freeman

Graduation Date:
PostDoc

Job Type:
Full Time Position

Ge Yang

Contact Email: geyang@mit.edu

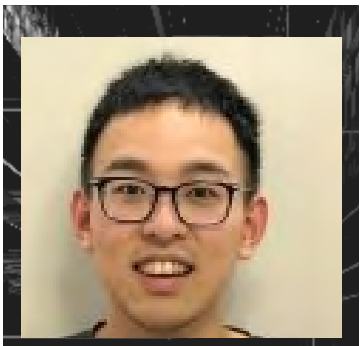
- **Research Category**: AI;Human Computer Interaction (HCI);Human Language;Machine Learning;Robotics;Vision & Graphics
- **Research Area (specific)**: robots and AI
- **Research Group**: Isola Lab, Freeman Lab, Machine Learning and Inference Lab
- **Primary Community of Research (CoR) at CSAIL**: Embodied Intelligence

Short Bio: Ge Yang is a postdoc Fellow with the NSF Institute of AI and Fundamental Interactions. He works on reinforcement learning, AI agents, language modeling and robotics.

Description of Research/Thesis Topic: Combining 3D perception with legged locomotion, to build autonomous robots that can collaborate with each other. AI Agent

Additional Information:

- **Website**



Primary CSAIL Advisor:
Mohammad Alizadeh

Degree/Role:
PhD

Graduation Date:
June 2024

Lei Yang

Contact Email: leiy@csail.mit.edu

- **Research Category**: Networks, Systems
- **Research Area (specific)**: Distributed system
- **Primary Community of Research (CoR) at CSAIL**: Systems

Short Bio: Lei Yang is a PhD student working on networks and systems. His research interests include consensus protocols, high-performance distributed systems, and their deployment on the internet.

Description of Research/Thesis Topic: Lei's research focuses on distributed consensus on the wide area network.

Additional Information:

- **Website**

Primary CSAIL Advisor:
Manya Ghobadi

Degree/Role:
PhD

Graduation Date:
May 2025

Job Type:
Full Time Position

Mingran Yang

Contact Email: mingrany@mit.edu

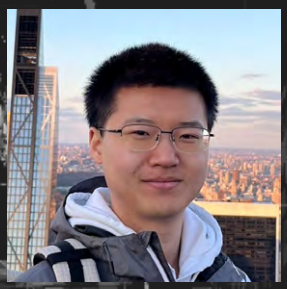
- **Research Category**: Networks;Systems
- **Research Area (specific)**: Systems and networks for machine learning
- **Research Group:** NMS
- **Primary Community of Research (CoR) at CSAIL**: Systems

Short Bio: Mingran Yang is a fifth-year Ph.D. student at MIT CSAIL, advised by Prof. Manya Ghobadi. Before joining MIT, Mingran received her bachelor's degree from Fudan University and master's degree from Carnegie Mellon University. Her research primarily focuses on systems and networking, specifically on the design of network systems for machine learning applications. She is a recipient of the Microsoft Research PhD Fellowship and MIT Presidential Fellowship.

Description of Research/Thesis Topic: The design of network systems for machine learning applications.

Additional Information:

- **Website**
- **Resume**



Primary CSAIL Advisor:
Mengjia Yan

Degree/Role:
PhD

Graduation Date:
May 2027

Job Type:
Summer Internship

Yuheng Yang

Contact Email: yuhengy@mit.edu

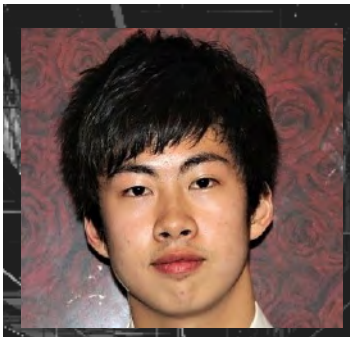
- **Research Category**: Architecture;Languages & Verification
- **Research Area (specific)**: Hardware Security, Computer Architecture, Formal Method
- **Primary Community of Research (CoR) at CSAIL**: Systems

Short Bio: Yuheng Yang is a PhD student at MIT EECS advised by Prof. Mengjia Yan. He works on using formal methods to design secure hardware, with a focus on mitigating timing side channels and speculative execution attacks. He has published papers in conferences including ASPLOS, ISCA, and MICRO. Yang received his M.S. degree from MIT in 2024.

Description of Research/Thesis Topic: 1) Develop security-oriented microarchitecture models to assist early-stage security evaluation. 2) Improve the scalability of RTL verification by leveraging architectural insights. Techniques used in these two topics include model checking, taint analysis, shadow logic for verification, and statistic analysis.

Additional Information:

- **Website**



Primary CSAIL Advisors:
Dina Katabi

Additional Advisor(s)
Tomás Lozano-Pérez

Degree/Role:
PhD

Graduation Date:
June 2024

Job Type:
Internship

Yuzhe Yang

Contact Email: yuzhe@mit.edu

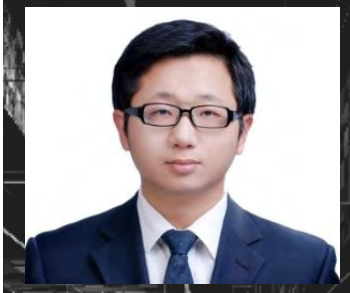
- **Research Category**: Artificial intelligence, Machine Learning, Networks, Systems
- **Research Area (specific)**: Machine Learning & Wireless Sensing
- **Research Group**: NETMIT

Short Bio: Yuzhe is a PhD student in Computer Science at MIT CSAIL. He is advised by Professor Dina Katabi. Before coming to MIT, he finished his undergraduate study with honors at Peking University. His research focuses on learning-based wireless sensing for healthcare, robust machine learning, and reinforcement learning.

Description of Research/Thesis Topic: Yuzhe's research focuses on AI-based wireless sensing systems, as well as their applications for healthcare. He also works on robustifying machine learning models to common perturbations, class imbalance, and adversarial attacks. He also develops structured approaches to improve (deep) reinforcement learning algorithms. His research draws on tools from wireless systems, computer vision and machine learning.

Additional Information:

- **Website**



Primary CSAIL Advisor:
Daniela Rus

Degree/Role:
Postdoctorate

Job Type:
Full Time Position

Lianhao Yin

Contact Email: lianhao@mit.edu

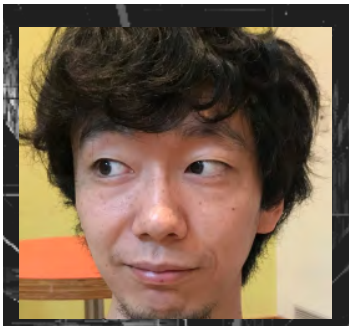
- **Research Category**: AI;Computational Biology;Human Computer Interaction (HCI);Machine Learning;Robotics;Vision & Graphics
- **Research Area (specific)**: Robotic learning and control
- **Research Group**: DRL

Short Bio: Lianhao Yin is a Wallenberg postdoc fellow at CSAIL MIT, advised by Prof. Daniela Rus. Before that, he worked in the automotive industry and obtained his Ph. D from Lund University, Sweden, advised by Prof. Per Tunestål and Rolf Johansson

Description of Research/Thesis Topic: The research topic is to let robots learn to interact with humans and environments. I would like to solve fundamental problems to let robots to learning and interact with humans and environments, with applications in aerial robots, mobile robots, medical robots, manufacturing, energy systems, and beyond.

Additional Information:

- **Website**
- **Resume**



Primary CSAIL Advisors:
Stefanie Muller

Degree/Role:
PhD

Graduation Date:
August 2025

Job Type:
Full-Time Position

Takatoshi Yoshida

Contact Email: taka_y@mit.edu

- **Research Category**: Algorithms & Theory, Human-Computer Interaction (HCI)
- **Research Area (specific)**: Computational Fabrication
- **Research Group**: HCI

Short Bio: Takatoshi Yoshida (goes by Taka) is a researcher, engineer, and designer from Japan. His focus is on the design of meaningful interactions between human and materials/machines, giving novel functionalities to daily materials and creating interactive interfaces which augment our limited perceptual capability. He is also interested in the interconnection between perceivable material properties and imperceptible physical/ computational design with particular emphasis on digital fabrication, programmable electronics, computer vision and flexible optics.

Description of Research/Thesis Topic: Human-Computer Interaction

Additional Information:
- **Website**

Primary CSAIL Advisor:
Hal Abelson

Additional Advisors:
Evan Patton

Degree/Role:
Undergraduate/UROP

Graduation Date:
May 2025

Job Type:
Summer Internship

Kidus Yohannes

Contact Email: kidusy@mit.edu

- **Research Category**: AI;Algorithms;Human Computer Interaction (HCI);Machine Learning
- **Research Area (specific)**: Generative AI in Education
- **Research Group:** MIT App Inventor
- **Primary Community of Research (CoR) at CSAIL**: Human-Computer Interaction

Short Bio: Kidus is a rising senior at MIT, pursuing a double major in Artificial Intelligence & Decision Making (Course 6-4) and Finance (Course 15-3). He is passionate about machine learning research and software development, with a particular focus on K-12 education and financial technology. Kidus is deeply committed to the principle that every student, regardless of race, gender, or socio-economic background, deserves access to high-quality education. In his spare time, he enjoys creating software products, including personal websites, AI-driven tools, and intricate games. Kidus excels in innovative, collaborative, and fast-paced work environments.

Description of Research/Thesis Topic: Kidus' research focuses on the intersection of generative AI and education accessibility. He is currently exploring the optimization of AI models for MIT App Inventor's chatbot feature, aiming to enhance accuracy, efficiency, and cost-effectiveness through advanced prompt engineering and fine-tuning techniques. His work seeks to make educational tools more accessible and effective for learners worldwide.

Additional Information:
- **Website**
- **Resume**

Primary CSAIL Advisor:
Russ Tedrake

Additional Advisors:
Evan Patton

Degree/Role:
Master's

Graduation Date:
December 2025

Job Type:
Full Time Position

Christina Yu

Contact Email: chryu@mit.edu

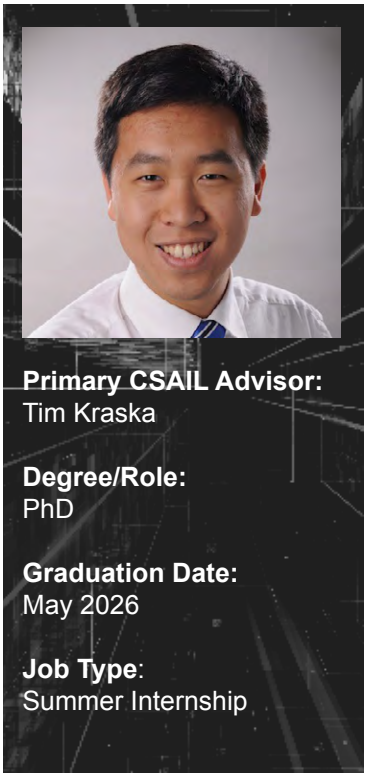
- **Research Category**: AI;Machine Learning;Robotics
- **Research Area (specific)**: Robot learning, generative modeling, interpretability
- **Research Group: Robot Locomotion Group**
- **Primary Community of Research (CoR) at CSAIL**: Embodied Intelligence

Short Bio: Christina Yu is a student at MIT pursuing a B.S. in Computer Science and Mathematics and a Master of Engineering (MEng) in Computer Science, advised by Prof. Russ Tedrake. She is broadly interested in machine learning, generative models, and interpretability, especially in the context of robot learning. Previously, she worked on problems in topological combinatorics and discrete geometry with Prof. Pablo Soberón, and algorithms for combinatorial optimization with Prof. Michel Goemans.

Description of Research/Thesis Topic: Christina's current research focuses on understanding the inductive biases of conditional diffusion models that make them well-suited to robot control tasks (e.g. diffusion policy).

Additional Information:

- **Website**



Primary CSAIL Advisor:
Tim Kraska

Degree/Role:
PhD

Graduation Date:
May 2026

Job Type:
Summer Internship

Geoffrey X Yu

Contact Email: geoffxy@csail.mit.edu

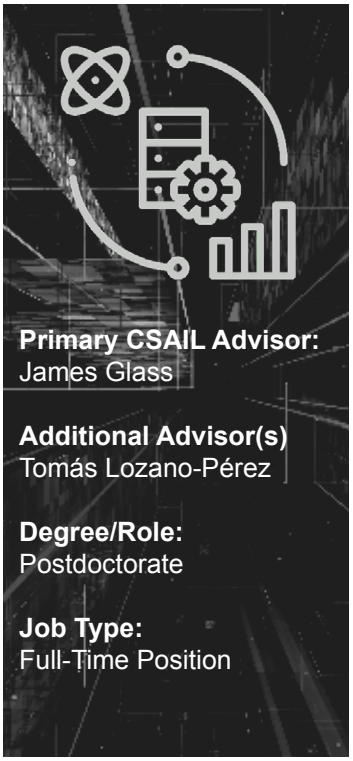
- **Research Category**: Systems
- **Research Area (specific)**: Instance-Optimized Data Systems
- **Research Group:** Data Systems (Databases)
- **Primary Community of Research (CoR) at CSAIL**: Systems

Short Bio: Geoffrey Yu is a PhD student at MIT, advised by Professor Tim Kraska. He is part of the Data Systems Group within CSAIL. Geoffrey is generally interested in systems and databases research. He currently works on applying optimization techniques to design new database systems that can automatically adapt themselves to the workload. Geoffrey also enjoys thinking about problems at the intersection of systems and human-computer interaction as he strongly believes in the value of creating usable systems software.

Before starting his PhD, Geoffrey earned his master's degree in Computer Science at the University of Toronto. Before graduate school, he earned a bachelor's degree in Software Engineering at the University of Waterloo. Geoffrey is also a recipient of the NSERC Canada Graduate Scholarship (CGS D) (2020) and the Snap Research Scholarship (2019).

Description of Research/Thesis Topic: I work on developing new HTAP (hybrid transactional and analytical processing) database systems that automatically adapt and optimize themselves to the workload.

- **Website**
- **CV**



Primary CSAIL Advisor:
James Glass

Additional Advisor(s)
Tomás Lozano-Pérez

Degree/Role:
Postdoctorate

Job Type:
Full-Time Position

Seunghak Yu

Contact Email: seunghak@csail.mit.edu

- **Research Category**: Artificial intelligence, Human Language, Machine Learning
- **Research Area (specific)**: Natural Language Processing
- **Research Group**: Spoken Language Systems Group
- **Primary Community of Research (CoR) at CSAIL**: Applied Machine Learning

Short Bio: Seunghak Yu received the BS and M.S. degrees in electrical engineering, and PhD degree from Korea University, South Korea. He held a research position at Seoul National University and joined Samsung Research, South Korea. He is currently a postdoctoral associate at the MIT Computer Science and Artificial Intelligence Laboratory (CSAIL).

Description of Research/Thesis Topic: Seunghak's research interests include machine learning and its application to natural language processing. After joining MIT, he has been working on fake news detection and natural language understanding for multimodal system.

Additional Information:
- **Website**

Primary CSAIL Advisor:
Michael Carbin

Degree/Role:
PhD

Graduation Date:
December 2025

Job Type:
Full Time Position

Charles Yuan

Contact Email: charlesyuan@mit.edu

- **Research Category**: Languages & Verification
- **Research Area (specific)**: Programming Languages + Quantum Programming
- **Research Group**: Programming Systems Group
- **Primary Community of Research (CoR) at CSAIL**: Vertical AI

Short Bio: Charles Yuan is a Ph.D. student at MIT CSAIL working with Prof. Michael Carbin. His current research examines the challenges of programming quantum computers and other emerging models of computation. His work has appeared in the ACM SIGPLAN POPL, OOPSLA, and PLDI conferences. He has been recognized with the SIGPLAN Distinguished Artifact Award, as a CQE-LPS Doc Bedard Fellow, and as an RPI Rising Star in Quantum Computing.

Description of Research/Thesis Topic: I design programming systems that enable us to correctly and efficiently implement algorithms on quantum computers.

Quantum algorithms promise up to exponential advantage in performance over classical algorithms for tasks such as simulation, search, and optimization. These algorithms operate by exploiting physical properties of quantum information such as superposition, interference, and entanglement.

My research, however, identifies how these properties also make it difficult or inefficient to adapt fundamental programming abstractions, such as data structures and control flow, to work on quantum data. Left unresolved, these programming challenges jeopardize the speedup offered by quantum algorithms and hinder their practical realization.

In response, I show how we can reinvent programming abstractions to meet the needs of quantum algorithms. This work holds out a promise of enabling both expressive and efficient abstractions for quantum programming — tools that are indispensable for us to reap the benefits from the Herculean effort of building a quantum computer.
Additional Information:
- **Website**
- **Resume**

Primary CSAIL Advisor:
Neil Thompson

Degree/Role:
Undergraduate/UROP

Graduation Date:
May 2027

Job Type:
Summer Internship

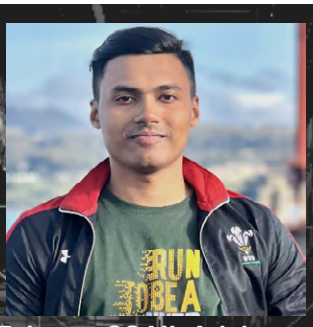
Grace Yuan

Contact Email: yuangc@mit.edu

- **Research Category**: AI;Algorithms;Human Computer Interaction (HCI);Human Language;Machine Learning;Networks
- **Research Area (specific)**: AI in Science
- **Research Group:** FutureTech

Short Bio: Grace Yuan is a sophomore pursuing a Bachelor's degree with double majors in Mathematics & Artificial Intelligence and Decision Making at MIT. Grace is driven by a curiosity for the intersection of mathematics and artificial intelligence, and she is excited to contribute to cutting-edge research and applications in these dynamic fields.

Description of Research/Thesis Topic: Assess the accessibility and democratization of AI in science and evaluate the performance of open-source AI models against established data benchmarks within the MIT Computer Science and Artificial Intelligence Laboratory (CSAIL)'s FutureTech Group, supervised by research scientist Ana Trisovic and Prof. Neil Thompson. Survey a wide base of scientific literature to expand the results in the AI models database. Analyze models in these papers to fill in important details like model performance. Evaluate the training code based on its quality



Primary CSAIL Advisor:
Mina Konaković Luković

Degree/Role:
PhD

Graduation Date:
June 2029

Job Type:
IAP Internship

Akib Zaman

Contact Email: akib@csail.mit.edu

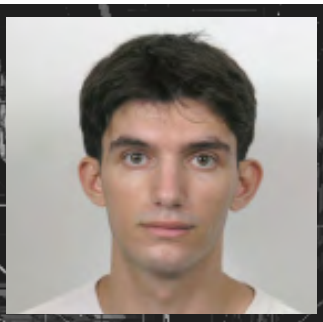
- **Research Category**: Algorithms;Machine Learning;Robotics;Vision & Graphics
- **Research Area (specific)**: Design and Control Optimization in Self Reconfigurable Robots
- **Research Group**: Algorithmic Design Group
- **Primary Community of Research (CoR) at CSAIL**: Visual Computing

Short Bio: Akib Zaman is a First-year PhD student in EECS, MIT-CSAIL under the guidance of Professor Mina Konaković Luković. He completed his Undergraduate in Computer Science and Engineering from the Military Institute of Science & Technology, Bangladesh in 2021. His current research focuses on algorithmic and optimization techniques at the intersection of Robotics and Geometry Processing.

Description of Research/Thesis Topic: Akib's current project is developing methods to optimize design and control mechanisms of self reconfigurable robot. He further wants to investigate the possibility to increase the design freedom of such robotic systems by leveraging various geometric processing techniques and explore the applications in the field of agriculture and space exploration.

Additional Information:

- **Website**
- **Resume**



Primary CSAIL Advisor:
Christina Delimitrou

Degree/Role:
PhD

Graduation Date:
June 2028

Job Type:
Summer Internship

Christos Zarkos

Contact Email: czarkos@mit.edu

- **Research Category**: Architecture;Systems
- **Research Area (specific)**: Computer Architecture, Computer Systems
- **Primary Community of Research (CoR) at CSAIL**: Systems

Short Bio: Christos Zarkos is a first year PhD student in the Department of Electrical Engineering and Computer Science at MIT. He received his Bachelor's degree at Computer Science from the University of Crete. He is interested in Computer Architecture and Systems. In general, architectural problems combining other fields of research can be of interest to him.

Description of Research/Thesis Topic: As a first year PhD student, Christos is exploring different directions for his future research in Computer Architecture and Systems.

Additional Information:

- **Website**
- **Resume**

Primary CSAIL Advisor:
Mina Konaković Luković

Degree/Role:
PhD

Graduation Date:
June 2029

Job Type:
Summer Internship

Xiao Sean Zhan

Contact Email: zhanx@csail.mit.edu

- **Research Category**: AI;Machine Learning;Vision & Graphics
- **Research Area (specific)**: 3D Generative Models
- **Research Group**: Algorithmic Design Group
- **Primary Community of Research (CoR) at CSAIL**: Visual Computing

Short Bio: Xiao Sean Zhan is a first year PhD student at MIT CSAIL, and Xiao Sean is excited to continue research on 3D generative models. He previously obtained his Sc.B. from Brown University where he worked on shape interpolation and text-to-shape generation. Xiao has also worked at Pixar as a Research Intern on neural skinning.

Description of Research/Thesis Topic: Xiao Sean's research focuses on the intersection of computer graphics and artificial intelligence; he uses machine learning techniques to understand, generate, and manipulate 3D shapes**.**

Additional Information:

- **Website**
- **Resume**

Primary CSAIL Advisor:
Daniela Rus

Degree/Role:
PhD

Graduation Date:
May 2026

Job Type:
Summer Internship

Annan Zhang

Contact Email: zhang@csail.mit.edu

- **Research Category**: AI;Robotics
- **Research Area (specific)**: Physically Intelligent Robots
- **Research Group:** Distributed Robotics Laboratory
- **Primary Community of Research (CoR) at CSAIL**: Embodied Intelligence

Short Bio: Annan Zhang is a PhD student at MIT CSAIL under the guidance of Daniela Rus. He holds a master's degree in electrical engineering and computer science from MIT, and both a master's and a bachelor's degree in mechanical engineering from ETH Zürich. Annan also interned as an AI/ML Scientist at Vanguard, where he explored the applications of AI and large language models in finance.

Description of Research/Thesis Topic: Annan's research sits at the intersection of robotics, materials, and machine learning. He aims to develop physically intelligent robots that perceive and interact with their environment in human-like ways, paving the way for broader adoption of robotic technologies.

Additional Information:
- **Website**
- **Resume**

Primary CSAIL Advisor:
Julian Shun

Additional Advisors:
Michael Cafarella

Degree/Role:
PhD

Graduation Date:
June 2028

Job Type:
Summer Internship

Sylvia Zhang

Contact Email: sylziyuz@csail.mit.edu

- **Research Category**: Algorithms;Performance Engineering;Systems
- **Research Area (specific)**: Efficient data management for trustworthy, up-to-date AI and discovery
- **Research Group:** Parallel Algorithms Group / Data Systems Group
- **Primary Community of Research (CoR) at CSAIL**: Vertical AI

Short Bio: Sylvia Zhang was born and raised in northeastern China. In 2018, Sylvia moved to Pittsburgh to attend the School of Computer Science at Carnegie Mellon University. During the time there, Sylvia was advised by Professor David Woodruff on research in algorithms for big data. After graduating in 2021, she worked under Professor Andy Pavlo at a start-up on cloud-based database optimization. Sylvia enjoys working with data and aim to combine theory and practice to tackle problems in data management brought about by the drastically shifting landscape of data usage.

Description of Research/Thesis Topic: Sylvia's general research area is data management for accurate, trustworthy, up-to-date multimodal retrieval and other AI applications

Additional Information:
- **Resume**

Wei Zhang

Contact Email: w_zhang@mit.edu

- **Research Category**: Machine Learning, Performance Engineering, Theory
- **Research Area (specific)**: Game Theory; Statistics
- **Research Group**: Theory Group
- **Primary Community of Research (CoR) at CSAIL**: Theory of Computation

Short Bio: Wei Zhang is a PhD student in MIT. Prior to that, she received a bachelor's degree from Tsinghua Yao Class, China.

Description of Research/Thesis Topic: Wei's research interest lies in statistical learning theory, interplayed with information theory and economics.

Additional Information:

- **Website**

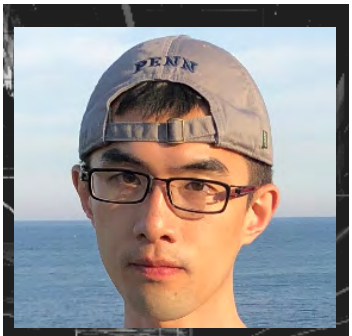
Primary CSAIL Advisor:
Costis Daskalakis

Degree/Role:
PhD

Graduation Date:
September 2026

Job Type:
Internship

Yihao Zhang



Contact Email: yihaozh@mit.edu

- **Research Category**: Artificial intelligence, Machine Learning, Robotics, Vision & Graphics
- **Research Area (specific)**: Object-Based Semantic Mapping
- **Research Group**: Marine Robotics Group

Short Bio: Yihao Zhang is a Ph.D. candidate at MIT CSAIL. He received his BS degree from the University of Michigan - Ann Arbor and SM degree from MIT both in mechanical engineering. He started to work on robotics in 2018 with a focus on SLAM (simultaneous localization and mapping) and computer vision.

Description of Research/Thesis Topic: Yihao's research interest is the emergence of deep learning and classical methods in applications of computer vision, SLAM, and physics. He is currently working on several aspects of object-based semantic mapping, such as map representation, object pose estimation, object shape estimation, and semi-supervised learning. He is also applying learning based computer vision techniques to automate the design of micro-structures on a boiling surface to facilitate heat transfer.

Additional Information:

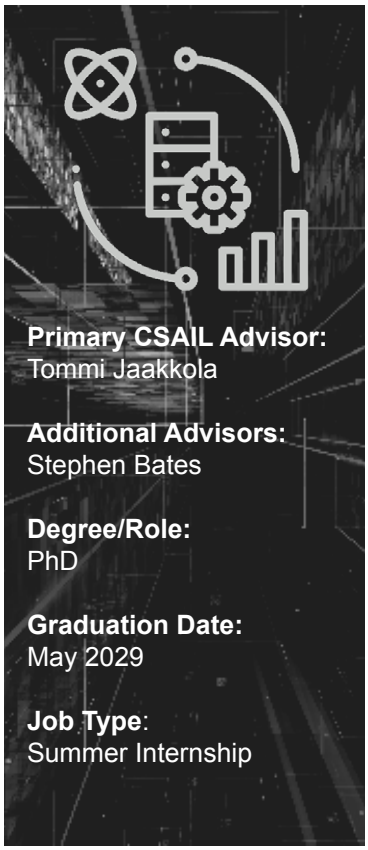
- **Resume**

Primary CSAIL Advisor:
John J. Leonard

Degree/Role:
PhD

Graduation Date:
September 2024

Job Type:
Full-Time Position



Primary CSAIL Advisor:
Tommi Jaakkola

Additional Advisors:
Stephen Bates

Degree/Role:
PhD

Graduation Date:
May 2029

Job Type:
Summer Internship

Cai Zhou

Contact Email: caiz428@mit.edu

- **Research Category**: AI;Computational Biology;Machine Learning
- **Research Area (specific)**: Machine Learning Theory, Generative Models, AI4biology
- **Research Group:** Machine Learning and Inference
- **Primary Community of Research (CoR) at CSAIL**: Applied Machine Learning

Short Bio: Cai Zhou is a first year PhD student in MIT EECS, co-advised by Tommi Jaakkola and Stephen Bates. Cai is affiliated with CSAIL and LIDS. Their recent research focuses on the intersection of machine learning, generative models and AI4Science.

Prior to their PhD, Cai received a bachelor from the Department of Automation, School of Information at Tsinghua University. Cai is also a member of Class of General Artificial Intelligence of Tsinghua University, and a minor in statistics. For undergraduate research, Cai is fortunate to work with Muhan Zhang at Institute for Artificial Intelligence of Peking University. They have great collaborations working on machine learning theories, graph neural networks, AI4Science and LLMs/foundation models. In the summer of 2023, Cai had the privilege to intern at UCSD advised by Yusu Wang and Rose Yu on machine learning. Cai also worked with Gao Huang at Tsinghua University on computer vision.

Description of Research/Thesis Topic: Cai Zhou's research interest lies broadly in theoretical and applied machine learning. Cai aims to understand the foundations of machine learning, with a special focus on its probabilistic and geometric nature. Cai is also interested in application areas including computer vision, natural language processing and computational biology. Some interested research topics include:

Theoretical Machine Learning: optimization, statistics, game theory
Generative Models: diffusion models, LLMs, multi-modal foundation models
AI for Science: geometric deep learning, AI4biology, AI4healthcare

Additional Information
Website
Resume

Primary CSAIL Advisor:
Srini Devadas

Degree/Role:
PhD

Graduation Date:
May 2030

Job Type:
Summer Internship

Xiaochen Zhu

Contact Email: xczhu@mit.edu

- **Research Category**: Machine Learning;Privacy and Security
- **Research Area (specific)**: Data Privacy in Machine Learning

Short Bio: Xiaochen Zhu is a first year PhD student at MIT CSAIL where he was advised by Prof Srini Devadas. Prior to joining MIT, he obtained bachelor's degrees in computer science and mathematics, both with honors and highest distinction, at National University of Singapore (NUS), where he worked with Prof Xiaokui Xiao and Prof Vincent Y. F. Tan. At NUS, he worked on privacy risks in federated learning, differential privacy and graph neural networks. He received the Outstanding Undergraduate Researcher Prize at NUS and was the first place at the SIGMOD 2023 Student Research Competition (Undergraduate Category).

Description of Research/Thesis Topic: Xiaochen Zhu's research focuses on data privacy and machine learning. Currently, his research interests are in differential privacy, federated learning, ML privacy and new privacy notions. He aims to identify privacy vulnerabilities in various algorithms and design privacy-preserving protocols to enhance their privacy. He tries to tackle these problems via both theoretical and empirical lenses.

Additional Information:
- **Website**
- **Resume**

Primary CSAIL Advisor:
Justin Solomon

Additional Advisors:
Marzyeh Ghassemi

Degree/Role:
Postdoctorate

Graduation Date:
October 2024

Job Type:
Full Time Position

Jiacheng Zhu

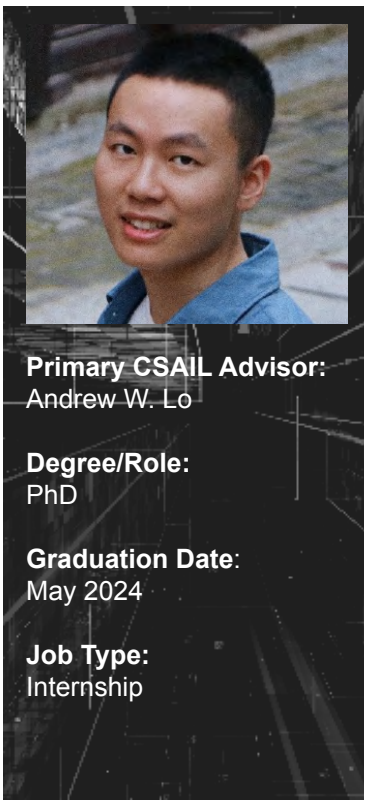
Contact Email: zjc@csail.mit.edu

- **Research Category**: AI;Human Language;Machine Learning
- **Research Area (specific)**: Foundation model, LLM, Trustworhty ML
- **Research Group:** GDP, HealthyML Lab
- **Primary Community of Research (CoR) at CSAIL**: Applied Machine Learning

Short Bio: Jiacheng Zhu is currently a postdoc at MIT CSAIL, working with Justin Solomon and Marzyeh Ghassemi. Jiacheng obtaiend a Ph.D. from Carnegie Mellon Univeristy, as well as an M.S. in Machine Learning. They are fourtunate to have Prof. Long Nguyen to be an academia advisor, and work closely with Prof. Bo Li. Jiacheng's research was awarded the Qualcomm Innovation Fellowship (QIF 2022). They have worked as a research intern at Apple AI/ML and AT&T Labs. Previously, Jiacheng received a bachelor's in Computational Mechanics and a minor in Data Science from Fudan University.

Description of Research/Thesis Topic: Jiacheng's research focuses on developing generalizable and trustworthy foundation models and machine learning methods . Specifically, Jiacheng worsk on fine-tuning, LLM efficiency and compression, mixture-of-experts (MoE), mechanisms of foundation models, and their applications in healthcare and robotics. They extract insights from Bayesian statistics, probabilistic modeling, and particularly optimal transport, to investigate the underlying geometric structures within both data and model parameters.

Additional Information
- **Website**
- **Resume**



Primary CSAIL Advisor:
Andrew W. Lo

Degree/Role:
PhD

Graduation Date:
May 2024

Job Type:
Internship

Zijie Zhao

Contact Email: zijzhao@csail.mit.edu

- **Research Category**: Artificial intelligence, Algorithms, Machine Learning
- **Research Area (specific)**: Fintech, Machine Learning, Data Science, Healthcare, Finance
- **Primary Community of Research (CoR) at CSAIL**: Applied Machine Learning

Short Bio: Zijie Zhao is a first-year PhD student in Electrical Engineering and Computer Science (EECS) supervised by Prof. Andrew W. Lo at MIT. Previously he received a master's degree from Harvard Biostatistics Department. Now he is a graduate student in both the Computer Science and Artificial Intelligence Laboratory (CSAIL) and Laboratory of Financial Engineering. (LFE) He previously had an internship at WeChat. He is looking for a summer internship position such as data scientist, machine learning engineer, or quantitative researcher.

Description of Research/Thesis Topic: Zijie's previous research is involved in applied machine learning & deep learning problems, such as analyzing large scale genomics, developing a PyTorch framework for mitochondria segmentation. His current research interests mainly focus on applying machine learning techniques to financial problems.

Learn more about CSAIL

For additional information on CSAIL students, postdocs and researchers, please visit the Alliances website at: cap.csail.mit.edu/members/people
You must be logged into your account to access the content.

In addition, visit the Alliances Spotlights section each month to learn more about the latest research developments from our CSAIL researchers, students, and member companies at: cap.csail.mit.edu/engage/spotlights

CSAIL Alliances is the broad umbrella that encompasses all engagement paths. The right path depends on your priorities. Reach out to your client relations coordinator to discuss opportunities available to your organization or expand your relationship with CSAIL.

There are many ways to connect with the lab. From simple to complex, there is a path for every engagement.

To stay connected, join the Alliances mailing list to learn about upcoming events, professional programs, and new research from the lab. This opportunity is open to colleagues across your organization with a company email address, so share the benefit widely.

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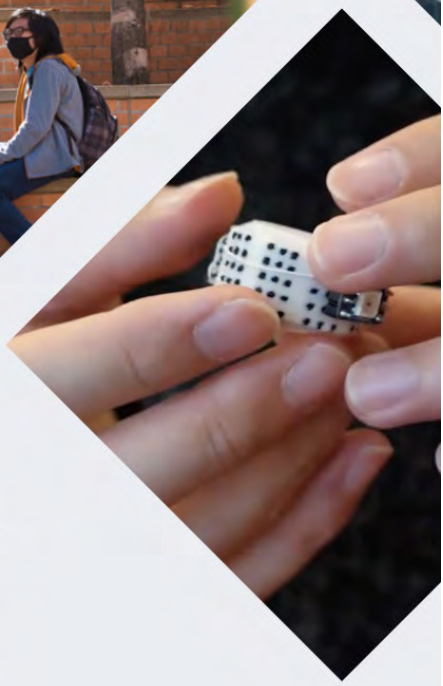

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