Systalyze

How CSAIL Spinout Systalyze is Democratizing Access to Efficient AI

Audrey Woods, MIT CSAIL Alliances | February 23, 2026

The rapid advancements in AI have transformed the way we do business. From smarter chatbots and workflow automation to product research and innovation, there isn't an industry that hasn't been affected by AI. More recently, agentic AI has introduced a tectonic shift—enabling systems to reason, act, and coordinate across complex workflows with minimal human intervention.

But developing such enterprise-specific solutions has, thus far, remained unnecessarily complex and inaccessible. Public AI platforms make it easy to prototype these capabilities, but at production scale, usage-based token pricing quickly becomes unpredictable and cost-prohibitive. At this point, companies are forced to choose between relinquishing control over cost and data with public AI platforms or moving deployments in house, which often introduces significant operational complexity and costly engineering expertise.

MIT CSAIL spinout and CSAIL Alliances Startup Connect member Systalyze is enabling companies to deploy AI at scale by cutting costs and maximizing AI efficiency. With their AI deployment and optimization platform, Systalyze makes it possible for any enterprise to deploy private AI in minutes. Companies can now build domain-specific AI solutions, achieving an average of 70% cost savings while maintaining complete data sovereignty.

Systalyze democratizes access to efficient AI by eliminating the wasteful resource consumption that plagues many deployments today—making AI more efficient, sustainable, and cost-effective.

STARTING THE COMPANY: RESEARCH BACKGROUND & CUSTOMER EXPERIENCE
Founder and CEO of Systalyze Manya Ghobadi is also an Associate Professor at MIT CSAIL where she works on building efficient systems for machine learning and high-performance cloud infrastructure. Along with a world-class team of AI and systems engineers, Professor Ghobadi and her co-founders—MIT CSAIL PhD alum Sudarsanan Rajasekaran and multi-time startup CTO Armin Ghobadi—are building Systalyze from the ground up as a commercial solution specifically designed to help organizations maximize the return on their AI investments through novel optimization approaches.

The complexity is staggering: managing library dependencies, debugging hardware drivers, configuring distributed systems, optimizing hyperparameters—each step requiring specialized knowledge that's scarce and expensive. What should be a straightforward process of deploying AI becomes a months-long engineering project with unpredictable costs and uncertain outcomes. There's no shortage of open source AI models to choose from, with GitHub repositories and step-by-step guides explaining how to launch them. But even though it looks simple, getting from an idea to an actual production environment is challenging:

- How many GPUs do you need?
- What is the expected performance/cost of this particular deployment?
- What are the optimal hyperparameters for this deployment?
- How will you measure and optimize GPU utilization?

Systalyze's platform transforms AI deployment from a months-long struggle into a simple 3-click process:

1. **Select a model:** Choose from leading open-source models or upload custom models.
2. **Attach data:** Point to the location of datasets within your own environment.
3. **Deploy:** Launch the model and let Systalyze automatically handle AI execution end to end.

Within minutes, enterprises can have production-ready AI tailored to their specific use cases running securely on their own infrastructure. Systalyze also analyzes AI workloads and implements calculated optimizations that dramatically improve performance without compromising accuracy.

Armin Ghobadi, Systalyze co-founder, explains what makes their solution so unique. **"Systalyze is like having an expert AI engineer built into your infrastructure. It automatically handles the complex optimization decisions that typically require months of specialized expertise. We're helping customers get more AI capabilities from their existing infrastructure investments, which means they can do more with less."**

Professor Ghobadi believes AI should be accessible to every organization. "High-performance AI doesn't require unlimited resources. We're proving that any organization can deploy sophisticated AI without burning millions of dollars on it." She explains that most companies we speak with already believe in AI. What they're looking for is a smarter, more economical way to make it real. That's where Systalyze comes in. We're the logical next step on their AI adoption journey."

CSAIL ALLIANCES
As Systalyze connects with AI-focused companies, Professor Ghobadi says, "I want to give credit to CSAIL Alliances. **CSAIL Alliances is helping us engage with these industry collaborators through the Alliances network, which is really powerful because they understand real-world deployment problems."** Now that Systalyze has created the AI execution and optimization tools and the knowledge base to support them, connecting with companies who are in the right stage of development to use their platform has been critical.

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Over the past year, Systalyze and Bayer Pharmaceuticals have worked together to optimize enterprise AI deployment across the organization. Working closely with Bayer's radiology, drug discovery, and IT departments, Systalyze tackled three critical challenges in AI deployment: cost efficiency, domain-specificity, and data privacy. The results have been transformative: average GPU utilization went from under 50% to 90%, AI deployment costs dropped by 63% saving millions of dollars of GPU and engineering hours over the course of a typical AI life cycle, and AI agent performance improved by 90%. Dr. Steffen Vogler, Principal Scientist at Bayer says, "This accomplishment highlights the potential to accelerate research and development timelines while scaling insight generation across complex biomedical datasets."

A HISTORICAL MOMENT
Professor Ghobadi sees our current era as an important inflection point, where "AI is critical for everyone, but companies are having to choose between spending a lot of money or just staying out of the game." Systalyze enables organizations to do more with their AI investments, innovating faster and deploying solutions that they previously couldn't justify. This creates a virtuous cycle of AI adoption that ultimately benefits end users across the world. Co-founder Dr. Sudarsanan Rajasekaran emphasizes the technical innovation behind their approach: **"We've essentially automated years of specialized AI deployment knowledge into a platform that any organization can use. While others focus on individual pieces of the puzzle, we're solving the entire AI lifecycle—from training to inference to multi-agent systems—all while keeping data completely private."**

Supported in part by CSAIL Alliances and its industry members, the Systalyze team envision a world where every enterprise can build their own sophisticated, domain-specific AI without compromising on cost, performance, security, or availability.