



Case Study



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In the modern technology market where the only constant is change, it can be challenging for enterprises to stay abreast of the latest developments and innovations. Even if one had time to read every paper and article coming out of top research institutions like MIT CSAIL, it would still be easy to miss what's happening in the labs in real time.

But sometimes those nascent technologies emerging behind the scenes are the very thing that could shape company policy, develop a new product, or even create a whole new business pipeline. Knowing about these projects can be key to getting a first-mover advantage. Being able to play a role in their development offers even more personalized value.

That's why CSAIL Alliances member [EY Consulting](#) is using the [MachineLearningApplications@CSAIL](#) research initiative to not only employ the most up-to-date AI research but also help shape future directions of work in ways that will benefit their customers and the broader global market.

ABOUT THE COMPANY: BUILDING A BETTER WORKING WORLD

EY is one of the largest professional services organizations in the world. With more than 300,000 professionals across 700 offices in more than 150 countries, they work across assurance, consulting, law, strategy, tax, and transactions. Guided by their purpose of “building a better working world,” the EY organization is committed to pursuing solutions in sustainability, inclusiveness, and generally supporting technology and systems that will inspire positive change.

Toward that end, Risk Consulting Partner at EY Vishal Gossain and Generative AI Risk Solution Lead at EY Kiranjot Dhillon — both of whom work on AI strategy in their respective roles — are focused on *responsible AI* activation (emphasis theirs). Dhillon clarifies that they are “thinking through what are the risks of this technology, the citizen impact, etc.”

Bringing 20 years of industry experience in the financial sector to this task, Gossain agrees that it is imperative for their team to have a rock-solid understanding of AI technology — both current and emerging — for them to responsibly guide their clients and customers on how to apply this technology for value generation. One way they're accomplishing this is through their relationship with MIT CSAIL.

CONNECTING WITH CSAIL: JOINING THE MLA INITIATIVE

Gossain's connection with CSAIL dates back to 2017, when he was working at Scotiabank as Vice President of Global Risk Management. While there, he joined the CSAIL Alliances [SystemsThatLearn@CSAIL](#) initiative, created to accelerate the development of innovative human-like systems. Some of the research in that now-closed initiative laid the foundation for [MachineLearningApplications@CSAIL](#), or [MLA@CSAIL](#). So when Gossain moved to the EY organization, it was a natural evolution of his relationship with CSAIL to join the [MLA@CSAIL](#) initiative. The EY organization was keen to participate in research and grow their AI practice, and Gossain's previously positive experience with CSAIL Alliances made joining an easy choice.

As members of a research initiative, the EY organization, along with the other company members on the initiative board, can vote on which projects the initiative funds out of the annual project submissions, a benefit which Gossain calls “an honor and a privilege.” This engagement gives them a “seat at the table at the forefront of innovation,” leading to not only deep academic insights into the direction of research but also technologies that have concrete market uses.

Gossain says CSAIL “significantly differentiates itself from other academic programs in the pragmatic nature of its research. It’s not theoretical, it’s actually practical.” Dhillon also highlights the advantage of what she calls a “two-way exchange,” where EY teams offer CSAIL researchers industry insight and priorities, which can be useful in crafting research questions for deep impact, and in return EY gets perspective on what is coming down the research pipeline and what innovations they should be factoring into their strategy. “MLA, and CSAIL in general, is one of the most pioneering institutions of its time in AI,” Gossain says, so they feel the MLA@CSAIL initiative offers them the best possible edge.

Several MLA@CSAIL projects have been of specific benefit to the EY organization. One example is CSAIL Director Professor Daniela Rus’s work building a new kind of model called Liquid Neural Networks based on the neurons of small worms. Liquid Neural Networks are explainable, scalable and more adaptable than traditional models. Professor Rus herself presented this new research to EY member firm partners, and Gossain describes how it led to bilateral talks about the “tremendous potential” of this exciting new technology.

Another area of research that has been of interest to the EY organization is the initiative’s work on bias and toxicity in generative AI, which is an important component of their team’s responsible AI framework. The research on federated learning was useful, Gossain says, as an “aspect of our ambitions on privacy-enhancing technologies in general.”

Finally, Gossain adds, the “technological applications of generative AI, especially code conversion systems, has been quite effective and useful for us.”

Beyond the upfront benefits of the research initiative, the EY organization has enjoyed several less obvious but no less useful advantages from being members of MLA@CSAIL. For instance, several of the Principal Investigators they’ve met through the initiative have agreed to advise EY clients on certain challenging questions, offering guidance on leading academic practices around a given technological subject.

Gossain and Dhillon have also enjoyed the CSAIL Alliances events and conferences, where, Gossain says, “we really got to learn from the best on how you are thinking about AI and how we can think about AI.” Most recently, they both attended the [2024 CSAIL Alliances Annual Meeting](#), with Gossain participating in the MLA@CSAIL panel.

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With their membership, the EY organization has also taken advantage of the other opportunities offered through CSAIL Alliances. Gossain explains that they've found the [SNAPSHOT program](#) particularly useful, as they get to bring clients to campus to enjoy a half-day deep-dive exploration of a given topic in computer science. Through these workshops, EY teams have been able to bring more value to their clients in the space of AI strategy and other pressing technical questions.

They've also made use of the course discounts offered through CSAIL Alliances and have been excited to interview and hire several CSAIL students. Overall, Gossain says, **“CSAIL plays a huge advantage [for EY], because we are always abreast of any innovation.”**

LOOKING AHEAD: EDUCATING CLIENTS AND APPLYING RESEARCH

With the ongoing success of the initiative, the EY organization is excited to continue to be a part of MLA@CSAIL. Gossain says, “we are really looking forward to how CSAIL will innovate, and therefore how EY will innovate.” Gossain and Dhillon are eager to build on the EY organization's relationship with CSAIL to educate clients, work with the professors toward helping create leading-edge solutions for their clients, and deploy these solutions responsibly by staying informed about the risks and drawbacks of generative AI.

On a more granular scale, Dhillon says they hope to learn more about multimodal AI, small language models, addressing deep fakes, and uncertainty modeling. As AI, particularly generative AI, looms larger in the market and therefore on company agendas, Gossain believes this work will “be a significant value-add to society in general [and] to our clients in particular.”

Overall, Gossain and Dhillon find working in AI exhilarating. Gossain encapsulates it by saying, “It's innovative. It's challenging. It's mind-boggling.” Harnessing the power of these incredible new technologies to solve real problems in the world is the “opportunity of a lifetime,” a sentiment Dhillon shares.

In such a fast-paced domain, they both have to stay nimble and ready for change since, as Dhillon jokes, “every day you wake up to new research.” But keeping up with the world of AI is a fulfilling and motivating challenge, one made easier by their relationship with CSAIL Alliances.