



Photo: Rachel van Heteren

# HELPING POLICY AND TECHNOLOGY WORK TOGETHER

EECS graduate student Keertan Kini is working to strengthen the intersection between the two fields.

By Rachel van Heteren | EECS

**K**eertan Kini can sum up his approach to life at MIT in one sentence. “When you’re part of a community, you want to leave it better than you found it,” says Kini, a graduate student in the Department of Electrical Engineering and Computer Science (EECS, also known as Course 6). That philosophy has guided Kini throughout his years at MIT, as he works to improve policy both within the Institute and beyond.

As a member of the Undergraduate Student Advisory Group (USAGE), former chair of the Course 6 Underground Guide Committee, and a member of the Internet Policy Research Initiative (IPRI) and the Advanced Network Architecture Group, Kini has focused his research on finding ways that technology and policy can work together. As he puts it: “There can be unintended consequences when you don’t have technology makers who are talking to policymakers and you don’t have policymakers talking to technologists.” His goal is to allow them to talk to each other.

At 14, Kini first started to get interested in politics. He volunteered for President Obama’s 2008 campaign, making calls and putting up posters. After that, he was campaigning for a ballot initiative to raise more funding for his high school. He hasn’t stopped being interested in public policy since.

High school was also where Kini became interested in computer science. He took a computer science class in high school at his sister’s recommendation, and in his senior year, he started watching computer science lectures on MIT OpenCourseWare (OCW) by Hal Abelson, the Class of 1922 Professor of EECS.

“That lecture reframed what computer science was. I loved it,” Kini recalls. “The professor said, ‘It’s not about computers, and it’s not about science.’ It might be an art or engineering, but it’s not science, because what we’re working with are idealized components, and ultimately the power of what we can actually achieve with them is not based so much on physical limitations so much as the limitations of the mind.”

In part thanks to Abelson’s OCW lectures, Kini came to MIT to study electrical engineering and computer science. He received an SB in EECS in 2016 and is now completing a master of engineering (MEng) degree.

### Combining two disciplines

Kini set his policy interest to the side his freshman year, until he took the Foundations of Information Policy class (6.805J) with Abelson, the same professor whose lectures had attracted him to computer science in the first place. After that, Kini joined Abelson and Daniel Weitzner, a principal research scientist in the Computer Science and Artificial Intelligence Laboratory (CSAIL), in putting together a big data and privacy workshop for the White House in the wake of the Edward Snowden leak of classified information from the National Security Agency. Later, Kini became a teaching assistant for 6.805J.

With Weitzner as his advisor, Kini went on to work on a SuperUROP, an advanced version of the Undergraduate Research Opportunities Program (UROP) in which students undertake an intensive research project for a full year. Kini’s project focused on making it easier for organizations that had experienced a cybersecurity breach to share how the breach happened with other organizations, without accidentally releasing private or confidential information as well.

Typically, when a security breach happens, there is a “human bottleneck,” Kini says. Humans have to manually check all information they exchange with other organizations to ensure they don’t share private information or get themselves into legal hot water. The process is time-consuming for all organizations involved. Kini created a prototype of a system that could automatically screen information about cybersecurity breaches, determining what data had to be checked by a human, and what was safe to send along.

Once finished with his SuperUROP, Kini became involved in the development of Votemate, a web app designed to simplify voter registration nationwide. But Kini’s interest in Votemate wasn’t only about increasing the number of people who register. “I think most people in this nation are centrist, and one of the reasons our political system gets polarized is because people who are polarized primarily turn out to vote,” he says. He believes the only reliable solution is increasing the number of people who actually cast ballots.

### Shaping policy on campus

Kini is also involved in making changes within the Institute. As a member of the Undergraduate Student Advisory Group (USAGE), Kini has been involved in exploring ways to revitalize the electrical engineering curriculum, redesigning the

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undergraduate lounge, and compiling a list of the resources available to EECS students. He is especially interested in making sure students know about the MIT resources for prospective entrepreneurs. Among them: StartMIT, an intensive Independent Activities Period (IAP) workshop designed to help students learn what’s involved in launching a startup.

“At MIT, we try to solve very difficult challenges, we try to solve very meaningful technical problems,” Kini says. “But what gets lost in the shuffle is: After you come up with a great idea, how do you get it out of your head and into the world?” StartMIT helps bridge that gap, he says.

Thanks to his own StartMIT experience, Kini knows that he wants to launch a business one day. “I see starting a company not only as an option, but the option,” he says. “It’s a way to make sustainable change in the world.”

*Editor’s Note: In May 2017, EECS recognized Keertan Kini’s contributions with a Paul L. Penfield Student Service Award.* 