



How Edifii is using AI to empower high school students and enhance school counseling

Audrey Woods | MIT CSAIL Alliances

To counteract the unfairness of luck and timing in the course of a young person's education, CSAIL Alliances Startup Connect member Edifii aims to replace chance with technology using their AI and neuroscience-powered platform.

One common theme in the profiles of successful people is the mentor or educator who appeared at the exact right moment to change their life's trajectory. Perhaps it was a teacher who introduced them to the subject which they'd go on to master, or a counselor who opened their eyes to a promising opportunity, or an advisor who guided them toward a satisfying challenge. These stories are inspiring in part because of the serendipity involved, the intervention of fate or chance that placed a young student on the tracks of success. How many potential stories of accomplishment will we never hear because luck didn't play out so favorably?

Offering a way to extend the reach of overloaded school counselors—whose average caseload is 400 students— Edifii's approach enables students to articulate their interests and offers relevant opportunities to help every young person reach their fullest potential.

ABOUT THE COMPANY

For CEO and co-founder Dr. Izzat Jarudi, the idea behind Edifii emerged from his own journey through academia. When he began MIT as an undergraduate, he felt "lost and had a bit of a rough transition from public schools." However, one reason he found his footing was because he connected, by chance, with Professor Pawan Sinha in the Brain & Cognitive Sciences department. "I met [Professor Sinha] my freshman year through one of the research seminars I happened to attend, and it got me very excited about a field I didn't know much about, which was neuroscience." Dr. Jarudi would go on to graduate from the MIT Brain and Cognitive Sciences department—doing research with Professor Sinha along the way—and then earn his PhD in Cognitive and Social Psychology from Yale.

After leaving academia, Dr. Jarudi stayed in touch with Professor Sinha while he entered the business world. During this time, Dr. Jarudi was thinking about the benefit of his education, looking for ways to give back to those just starting as undergraduates, or perhaps even earlier. Professor Sinha's son was in high school, so their conversations explored ways to help him and other teens gather information about the opportunities available to them. Much of this dialogue centered around "the power of a caring adult to change a young person's trajectory. We wanted to try and find a way to do that using insights from neuroscience and artificial intelligence."

While Dr. Jarudi had experienced the positive effect an engaged mentor could have on a young person's life, Professor Sinha, who serves as Edifii's Chief Scientist and co-founder, brought to Edifii the reverse perspective: that of an academic advisor. As an MIT Professor, every year he is assigned a handful of students to mentor.

"What I'm often struck by," Professor Sinha says, "is just how little I know about the students and, consequently, how little I can make recommendations about opportunities within or outside MIT." And this is with only seven or eight students. "So when you think about a high school counselor who has a caseload of maybe three hundred or more students, it's nearly impossible, even with the best of intentions, for a counselor to learn all the relevant information about a student's interests and goals and then go digging into the wide world to find the opportunities that student would benefit from."

The Edifii team has developed a technology-based solution to help advisors facing this problem via an application, which gathers information about students with an enjoyable and interactive quiz format. These quizzes use fun questions (like which celebrity they'd want to sit next to on an airplane) scientifically backed by cognitive science research to evaluate a student's personality, interests, and potential directions. The app can also integrate mental wellness, checking in with users on a regular basis to assess their stress levels, engagement, and other key aspects of how they're doing in school. This information creates a profile for the counselor, giving them conversation starters and a clear jumping-off point to help that student get where they want to go. With the Edifii platform, counselors can use their limited time most effectively, even in situations where they only have, for example, an hour a semester with a given student. Furthermore, Dr. Jarudi explains, the Edifii platform "not only gives the counselors an individual view into that student, but also an aggregate view across their caseloads," allowing them to create sessions around popular topics, evaluate the mental wellness of a student population, and understand trends.

After launching the company a couple of years ago, the team has trialed Edifii's approach among teens and counselors, giving them key insights into what formats work best and what kind of questions straddle the line between informative and fun. In 2024, they won a Small Business Innovation Research grant from the US Department of Education for their work addressing the counselor shortage and the challenge of young people disengaging from education. This grant allowed them to prototype and pilot their app at Highland Park High-School in New Jersey, including a new path-charting feature where an Al chatbot interface helps a student create a detailed action plan for a given interest or potential trajectory.

Edifii has benefited from their connection to MIT, getting involved in MIT Venture Mentoring Services (VMS) and MIT <u>I-Corps</u>, which helped them scope out their potential customers and refine their business strategy. Dr. Jarudi says it's important for them to stay tuned into the MIT ecosystem, especially as they continue to build out their platform.

One of the key ways Edifii is accomplishing that is via the CSAIL Alliances Startup Connect program.

CSAIL ALLIANCES: MENTORSHIP, INNOVATION, & SCOPE

Dr. Jarudi says one huge benefit of CSAIL Alliances is the mentorship and guidance available through its network. He says "[CSAIL Alliances Managing Director] Lori Glover has been very generous with her time. She cares about education and has connected us to a number of folks in the world of K-12 as well as to potential industry partners." It has been particularly useful for the Edifii team to hear what businesses are thinking when it comes to the changing economy and to understand how they're conceptualizing upskilling, changing positions, and the future of work in an increasingly Al-driven world. After all, the students of today are the workforce of tomorrow, so understanding what businesses think and need is critical to Edifii's offering.

Edifii has also been excited to engage with MIT research and stay up to date on what's happening in the academic world when it comes to Al and app development. Through CSAIL Alliances, they've connected with CSAIL researchers like Professor Hal Abelson, whose successful App Inventor has inspired hundreds of thousands of students to engage with computer science and create applications to solve problems in their communities. Seeing the variety of approaches, philosophies, and viewpoints around Al has helped Edifii think about their own methods. Dr. Jarudi says, "MIT is the center of change that is associated with Al and technology."

LOOKING AHEAD

With their platform being piloted in different environments, Dr. Jarudi explains that the company's current focus is on product development and using the data they're gathering to make improvements. "Our goal is to prove this model works in different kinds of school settings," he says, specifically the two central components of discovery and path-charting. Once their approach is established, he aims to branch out into new customer bases and settings, such as homeschool networks, universities, and workforce environments.

During this phase of product enhancement as they consider which elements of emerging Al and computer science technology to incorporate into their platform, Dr. Jarudi says CSAlL "continues to be a source of feedback as to how we think about bringing technology in that's relevant for the problems we're tackling." With that in mind, they're excited to engage more deeply with researchers who are pursuing related work and use this knowledge to inform their strategy. He says of CSAlL: "It's a community and a network that continues to help us test and learn as we build our product and bring it to the market."

For Dr. Jarudi, "it's ultimately about human potential and human connection." With Edifii, he hopes to tap the vast human potential that, due to luck or timing, has not had a chance to flourish. In complementing and broadening the reach of counselors, he wants to help young students get "a sense of discovering their identity and purpose, feel a sense of agency, and then connect with other people." By leveraging and connecting to resources like those offered by CSAIL Alliances, Dr. Jarudi believes Edifii will make it possible for more students in the future to do the same.