



Nexilis: Bringing AI Efficiency to Justice

Audrey Woods, MIT CSAIL Alliances | 2025

Brazil has one of the largest judicial systems in the world. With a legal framework that prioritizes consumer protection, 18,000+ judges oversee an inventory of more than 80 million active cases, about 1 case for every 2.5 Brazilians. The sheer volume of litigation presents speed, efficiency and cost challenges for companies and taxpayers. Even though, by constitutional mandate, Brazilian judicial case files must be free and accessible to the public and Brazil is a global leader in court digitization, data in case files (mostly free-form text in PDF documents) is completely unstructured. NLP and AI innovation are imperative to make it useful.

CSAIL Alliances Startup Connect Plus member Nexilis is leveraging natural language processing and other AI tools to expedite legal proceedings and minimize the burden on defendants, plaintiffs, and judges. By gaining insights from legal data, discerning factors influencing outcomes, and forecasting verdicts with the predictive ability of AI, Nexilis aims to streamline this overloaded process and unlock value for all.

BRINGING TECH TO LAW

Founding Partner & CEO of Nexilis Arlindo Eira Filho is a lawyer by training, with a degree from the Federal University of Amazonas in Brazil, an MBA from Kellogg at Northwestern, and a Master's from Harvard Law School. Eira Filho was always fascinated by the intersection of law, business, and technology, and, after 16 years consulting at McKinsey, Eira Filho decided to pursue a technological solution to Brazil's overburdened litigation system and started Nexilis in 2020.

Eira Filho describes how Brazil's legislation leads to millions of small claims cases, explaining, "let's suppose your airline overbooks your flight, you're bumped, and they don't accommodate you within a given time frame. Theoretically, this gives rise to pain and suffering damages that they'll have to pay in court. In this way, people sue airlines, banks, healthcare companies who deny coverage, utilities for overbilling or for illegally or unduly cutting off their power or gas." There are innumerable causes that give rise to a consumer case, which creates "a major headache for corporations."

Nexilis, Eira Filho explains, is lucky to be working in a data-rich and sizable court system. But this data availability is a double-edged sword. "The information is completely unstructured. It's essentially free text, and lawyers tend to write a lot. So it's very difficult to get insights out of the data." Nexilis is approaching this problem with a combination of methods, including large language models, statistical models for classifying images, as well as more traditional approaches. Taken together, the Nexilis platform helps customers (currently large corporate defendants) understand their portfolio of claims and predict the outcome of a case. Using AI to assess the evidence brought forward, the assigned judge, and the history of that particular legal approach, Nexilis can advise companies on if they should settle or if they should continue with litigation and, if litigation is the best route, what kind of evidence and arguments should be brought forward.

One thing that has changed Nexilis's approach is the dramatic evolution of LLM technology, which has become much better since the company was first launched four years ago. "Now that we have these LLMs, things have become easier and quicker. The technology is evolving, and we think these LLMs will be even better one or two years down the road, especially with the technology happening at CSAIL."

That's why Nexilis is glad to be part of the Startup Connect ecosystem at CSAIL Alliances.

CSAIL ALLIANCES: EXPERT INSIGHTS & ENTERPRISE CONNECTION

Eira Filho has strong ties to Cambridge after studying at Harvard and recruiting many MIT graduates during his time at McKinsey. While conceptualizing Nexilis, he says, "I knew MIT was the best place in the world if you were in artificial intelligence." While looking for ways to engage specifically with the computer science community at MIT, he found CSAIL and CSAIL Alliances which offered a way to be "close to such an intellectual powerhouse." Eira Filho says, "I was very happy that we were admitted to the program and I've been very happy ever since."

The highlight of the program for Eira Filho has been the 2025 CSAIL Alliances Annual Meeting, a member-only event held on campus every spring which brings together companies, startups, researchers, and students for an intensive program of talks, workshops, and networking opportunities. "It was a lot of content packed into three days, and we had the opportunity to interact with the professors, with other entrepreneurs, and see what students were doing. That's all very enriching."

Eira Filho was also able to schedule one-on-one meetings with CSAIL faculty during his visit to Cambridge, including Senior Research Scientist Jim Glass, who Eira Filho calls a "mentor" to Nexilis. "Dr. Glass is a worldwide authority on natural language processing, which is the core skill that we need to develop for our business to flourish. It was very good to hear the latest and greatest from him and to benchmark that against what we are doing." This glimpse into the most cutting-edge research validated Nexilis's strategy to use the simplest available techniques and reduce problem complexity. Eira Filho says, "if there were something much better than what we're using, Dr. Glass would tell us."

During the meeting, Eira Filho also connected with other startups in the CSAIL Alliances ecosystem, including Empallo, a startup working to broaden access to cardiovascular care. Filho's wife happens to be a cardiologist and they have scheduled a meeting with Empallo's team to discuss how this technology might be beneficial for Brazil.

LOOKING AHEAD: COLLABORATION, HIRING & A NEW VISION FOR JUSTICE

Following up on the Annual Meeting, Eira Filho has a list of other researchers and companies he's excited to connect and collaborate with. For example, Professor Sam Madden and Principal Research Scientist Michael Cafarella hosted a workshop on a new system for optimizing AI model building called Palimpsest which Eira Filho believes could be very useful for Nexilis. Eira Filho has also reached out to Liquid AI—a startup built around liquid networks that are much more efficient than traditional transformers—to explore new ways for Nexilis to process huge volumes of data.

For more information about CSAIL Alliances industry engagements, please visit:

cap.csail.mit.edu

Beyond research engagements, Nexilis is looking to expand their team by hiring a CSAIL PhD or master's student for a summer internship. Eira Filho believes in the cross-pollination of ideas that comes from bringing in fresh perspectives, both for the company and within academia, and he hopes that the mission behind Nexilis will inspire others the way it inspires him. "There's a sense of purpose to what we do here. Who doesn't want to make justice better?"

Eira Filho himself is driven by curiosity. "Don't you want to know what goes on inside the mind of a judge? Don't you want to learn or understand how people make decisions?" He hopes to not only make an important system more efficient but also to learn about human nature and behavior in legal proceedings. By turning court cases into algorithmic insight, Nexilis is opening the door to faster decisions, fairer outcomes, and new insights about justice.