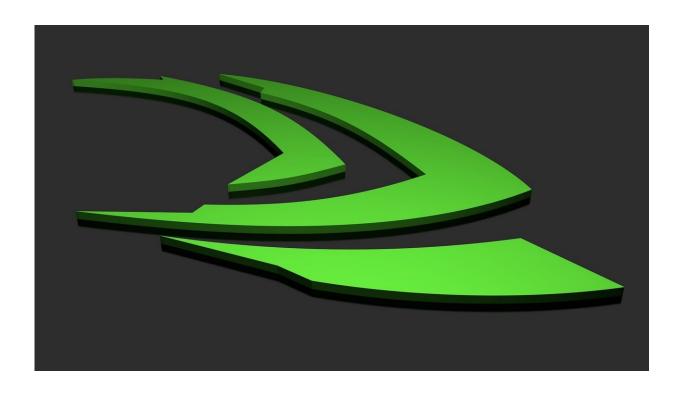


## Nvidia's \$70 million Florida supercomputer hobbled by DeSantis law

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Credit: Pixabay/CC0 Public Domain

When Chris Malachowsky, a billionaire co-founder of chip giant Nvidia Corp., bankrolled one of the world's biggest supercomputers at the University of Florida, Ron DeSantis predicted the machine would be a magnet for artificial intelligence talent.

Almost four years later, the Florida governor's anti-China crusade is



preventing some highly skilled AI researchers from ever setting foot in the state.

HiPerGator AI, built with Nvidia's lightning-fast AI processors and housed near a futuristic new computer science building bearing Malachowsky's name, was designed to make UF a leader in using cutting-edge computing for academic research. Malachowsky, a UF alumnus, and Nvidia each pumped \$25 million into the project. Florida's flagship university put up another \$20 million.

Academics at UF and other Florida universities want to use HiPerGator AI for everything from developing better strains of wheat to finding cancer-fighting drugs. Yet such work is being stymied, professors say, by a DeSantis-backed law that effectively blocks universities from recruiting from seven countries "of concern," including two that produce top AI researchers: China and Iran.

"It's a stupid law for many reasons. The reality is that we need to be attracting talent, not sending them away," said Danaya Wright, a <u>law professor</u> who chairs the university's faculty senate. "For some faculty, it will hamper research and set it back for several years."

The market for AI know-how has been tightening, stoked by investor excitement and big tech companies rushing to grab a piece of the burgeoning industry. Companies like Nvidia are offering large pay packages to AI specialists, exacerbating a shortage of capable hands in the academy.

Against that backdrop, recruiting researchers from China, Iran and other countries had helped UF stay in the game, yet DeSantis' law has hobbled aspirations for HiPerGator AI to advance research and compete with institutions outside the state. Hundreds of UF professors have petitioned university leaders including President Ben Sasse to roll back the



restrictions.

UF's "obligation is to comply with the restriction" on any employment contract with students from the seven countries, including researcher stipends, spokesman Steve Orlando said in a written statement. Sasse, a former Republican US senator from Nebraska, declined to comment.

Florida isn't alone in placing limits on Chinese students. The Biden administration has been using a Trump-era presidential proclamation to reject the visas of aspiring Ph.D. researchers from China suspected of having ties to the military. Outside the US, Canada put restrictions on Chinese researchers and the Netherlands is considering a crackdown.

Still, the restrictions signed into law by DeSantis raise more questions about how hospitable Florida is to finance, technology and other businesses that flocked to the state during the COVID-19 pandemic. Last year, top financial firms including billionaire Miami resident Ken Griffin's Citadel successfully lobbied to revise a ban on Chinese nationals investing in Florida real estate.

Representatives for DeSantis didn't respond to requests for comment. Malachowsky and Nvidia declined to comment.

## **Security concerns**

Backers of the law say there are legitimate reasons to be concerned about students coming from countries whose governments are antagonistic to the US. Washington and Beijing are at odds on numerous economic and security issues, including AI. The US has been in armed conflict with Iran-backed forces in the Middle East. DeSantis has said the prohibition on foreign researchers is intended to keep spies from stealing technology from Florida universities.



China's communist regime has focused on bolstering its <u>education</u> <u>systems</u> around AI since at least 2017, when it announced a plan to become "the world's primary AI innovation center" by 2030. Now, five of the top six universities that publish papers on AI are based in China, according to CSRankings, which tracks computer science research.

China is still playing catch-up with the US in AI, trailing in overall investments and newly funded AI startups. The gap was highlighted by the launch of OpenAI's ChatGPT and compounded by US export controls on the most advanced chips needed to train AI models.

That's part of why US universities are flooded with applications from China and Iran. In 2018, a quarter of the world's top AI researchers were from China, and 57% were recruited by US universities. Three-fourths stayed to work in the US, an analysis by research center MacroPolo found. Iran ranked fourth among countries supplying AI researchers to the US, according to Matt Sheehan, a fellow at Carnegie Endowment for International Peace who worked on the study at MacroPolo.

"Top talent wants to work with top talent," Sheehan said, "and historically American universities have been the place where that happens."

The State Department vets aspiring foreign graduate student researchers as part of its visa application process, checking multiple terrorism and law-enforcement databases. That makes Florida's law, which requires universities to create their own national security vetting departments, overkill, faculty leaders said.

"There is concern about China and Iran, and we don't want to downplay those concerns," Wright said. "But a sledgehammer is not the best way."

## Faculty pushback



Foreign Ph.D. students and postdoctoral fellows have long been crucial to academic research in the US. UF says its professors recruited more than 1,000 graduate students every fall from China, Iran, Venezuela and four other countries covered by Florida's law prior to its passage. This year, it's closer to zero, faculty leaders say.

"The day-to-day research work is actually done by grad students, not done by the faculty members," said Jiangeng Xue, a professor of materials science and engineering at UF. "If we don't have a pipeline of good, high-quality Ph.D. students, we cannot do all the work that we want to do."

Chenglong Li, a UF professor of medicinal chemistry, said he needed one researcher for fall 2024 to help with his work using AI to identify drug molecules that bind to proteins to treat certain cancers. By late last year, he'd found a candidate from Shanghai, but then Florida's Board of Governors, which oversees the state university system, issued guidance on DeSantis' law that made it all but impossible to offer a stipend.

In response to the law, the Board of Governors must approve each researcher who professors want to recruit from China and the other countries of concern, through an eight-step process culminating in a board meeting, spokeswoman Cassandra Edwards said in an email. So far, the board hasn't received any requests, she said.

In 2020, UF committed to making AI integral to every student's education by 2030 and has since hired 110 AI-specialized professors. The effort has contributed to the university's growing prestige; US News & World Report ranks it sixth among state schools, up from 19th in 2012.

In late January, Wright joined faculty leaders from across the state in Tallahassee for lunch with members of the Board of Governors. The



professors explained how the law blocked them from recruiting the best research talent, threatening Florida's progress in AI, said Wright.

Amanda Phalin, a UF management professor and member of the 17-member panel who attended that meeting, said she isn't aware of any planned changes to address the concerns.

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