DataRobot

Florida International University Triples Graduation Rates by **Aiding At-Risk Students**

Florida International University turned to data science to intervene proactively and help students succeed. In turn, it found 10 percent more at-risk students, contributing to graduation rates that tripled in the past decade.

Challenge

FIU proactively identifies and assists at-risk students, but previous modeling tools produced inaccurate results and required exhaustive manual input.

Solution

DataRobot AI Cloud cuts modeling time dramatically, enables more customized predictions, and saves money over on-premise options.

Result

FIU saves at least one FTE, identified 10% more at-risk students than before, and tripled graduation rates over the past decade – with help from DataRobot.

A Campus-Wide Commitment to Student Success

At Florida International University (FIU), student success is more than a commitment; it's a science.

The Miami-based university offers a top-50 public education to more than 56,592 students on campus and online, many of whom come from low-income areas or may be the first generation to attend college. The entire organization proactively works to keep students in school, which depends on spotting signs of trouble.

"Our secret is really that the entire institution, at every level, is committed to having our students succeed," said Dr. Hiselgis Perez, Associate Vice President, Analysis and Information Management, Florida International University.

For help identifying at-risk students, FIU turned to data science. In the past, the one full-time data scientist in FIU's Institutional Research Office used a few basic tools to assist in modeling; however, he ended up doing much of the work manually. Plus, the results were suspect. Because out-of-the-box solutions weren't tailored to the nuances of their institution, they would flag students that weren't actually at-risk.

Predicting Student Success

In the search for a solution, FIU found DataRobot's cloud-based augmented intelligence and ML platform would cut modeling time, enable more customized predictions, and reduce costs over on-premise options.

FIU | FLORIDA INTERNATIONAL UNIVERSITY

INDUSTRY

Education

PRODUCTS

DataRobot AI Cloud, MLOps, AutoML

SUMMARY

Florida International University is a top-50 public university that drives real talent and innovation in Miami and globally. High research activity and high social mobility come together at FIU to uplift and accelerate learner success in a global city focusing in the areas of environment, health, innovation, and justice. Today, FIU has two campuses and multiple centers. FIU serves a diverse student body of more than 58,000 and 260,000 Panther alumni. U.S. News and World Report places dozens of FIU programs among the best in the nation, including international business at No. 2. Washington Monthly Magazine ranks FIU among the top 20 public universities contributing to the public good.

Want more information on how you can get these results?

Learn More

"The best part about DataRobot is that the model is developed on our data," Perez said. "So it can be customized to how our students actually perform rather than trying to piggyback off of other models that were developed for other institutions."

FIU pulls a number of variables into models to pinpoint opportunities to assist students, from the number of credits taken to grades to financial challenges. Paden Goldsmith, Assistant Director of Strategic Data Analysis, continuously evaluates which data will help predict student success – with help from DataRobot's data science experts.

"One of the big benefits of DataRobot is being able to literally combine any type of data down to pictures and use that to actually make predictions," Goldsmith said. "We get predictions about these students as quickly as a couple of hours. The information is updated daily and refreshed in a Tableau dashboard that advisors, success coaches, and faculty members have as of that morning about how a particular student is doing."

The university then takes steps to help students remain in school, from tutoring to success coaching to finding financial aid solutions.

Finding 10% More At-Risk Students

With DataRobot, FIU now runs models faster and more frequently. With that extra time, Goldsmith refines data sources and searches for new ones.

"With DataRobot, what used to take months we can now do in a couple of days, or a week – tops," Goldsmith said. "It's an order of magnitude better."

Such efficiency allows the Institutional Research Office to operate with just one full-time data scientist with a couple of other team members supporting him part-time. To achieve the same results, he suspects they would have needed at least another full-time data scientist.

Beyond the staff savings, the university saves tens of thousands in infrastructure costs over having in-house hardware, software, and maintenance for analytics applications. What's more, the cloud model provides peace of mind that data is protected in extreme weather.

Most importantly, FIU has identified 10 percent more at-risk students than before – contributing to student success and graduation rates.

"We've been able to more readily identify students that are traditionally considered at risk," Goldsmith said. "But it's also been instrumental in identifying students who are doing fine academically, but have some prevalence to transfer out, to stop enrollment or whatever – a segment that wasn't captured before."

In an impressive turnaround, FIU increased its graduation rate from 19 percent to 59 percent over 10 years.

"In the past decade, we've tripled our graduation rates," Perez said. "And one of the tools that has helped us identify students for innovative interventions is DataRobot."

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