Machine Learning Secrets From Three Leading Organizations

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You already know that data is one of your organization's most valuable assets. Analysts, consultants and vendors have been talking about turning data into insights for years. Yet so many organizations still fail to take full advantage of the power of their own data. In this piece, we'll discuss how machine learning (ML) can supercharge your ability to get real business value from your data, and illustrate the point with three examples of organizations who have done it successfully.

ML allows computer systems to autonomously learn from experience by processing the data they receive and improve the performance of specific tasks. It's the engine that turns data into action. In practice, ML drives predictive analytics, anomaly detection and model building and deployment, all of which can be used to solve real-world problems, like these:

University of Nevada, Las Vegas Predicts Student Success

Hundreds of universities across the globe use machine-learning solutions to monitor their IT from a security and operational perspective. Matt Bernacki, assistant professor of educational psychology and higher education at the University of Nevada, Las Vegas (UNLV), realized the data they were collecting from systems across campus could provide insight into the engagement levels of individual students. He spearheaded a project to build a predictive model to help students who looked like they were likely to fail a course. The information helps lecturers and other academic staff make timely interventions to support students.

In pilot programs, researchers collected data on students' learning habits during the first four weeks of a course, and were able to identify, with about 80 percent accuracy, any student who will eventually earn a C grade or lower in the course. Using this data as part of the intervention program, the instructor can then give the student specific feedback on how to improve. As a result, UNLV has seen better student success rates, with up to a third of students improving to A or B grades, and experienced lower class dropout rates.

This application of ML that UNLV uses to identify students at risk of failure has potential well beyond the world of academia. It can also be used to identify customers at risk of attrition, for example, and target them for attention to improve their level of satisfaction.

TransUnion Uses Data to Level up Performance

With a global presence in more than 30 countries and territories, TransUnion helps businesses manage risk while also helping consumers manage their credit, personal information and identity. Behind the scenes, the company promotes reliable consumer transactions by consistently ensuring the stability of TransUnion's information technology systems. To streamline IT operations and improve customer experience, TransUnion needed to better track anomalies while visualizing and combining machine data from multiple applications.

Edward Bailey, senior monitoring and operations architect at TransUnion, wanted to improve performance monitoring for external customer traffic and customer volume transactions. "We were excited to utilize machine learning to establish our customer activity baseline and help with performance monitoring of our applications," says Bailey.

TransUnion experiences variable traffic cycles on its website, with higher transaction volumes at certain times of the day and week. With automation and machine learning algorithms in place, the company has a new way to monitor these traffic cycles and transactions. Thanks to ML, TransUnion was able to discover incident root causes in minutes instead of hours, to solve problems faster, meet customer SLAs and increase overall customer satisfaction. They reduced the number of false alerts and also saw increased revenue by improving transaction processing.

NewYork-Presbyterian Battles the Opioid Crisis With ML

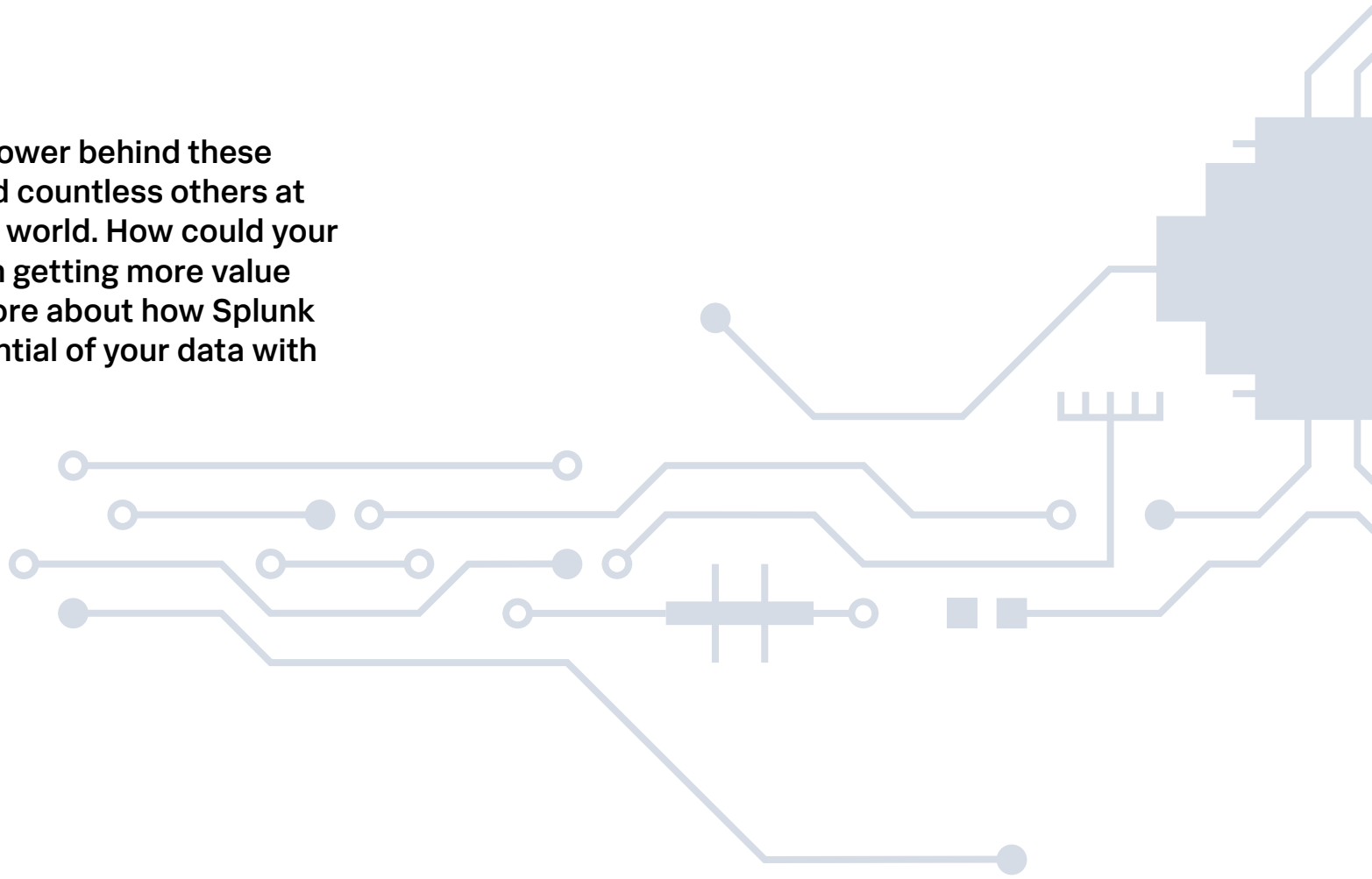
As one of the nation's most comprehensive, integrated academic healthcare delivery systems, NewYork-Presbyterian is dedicated to providing the highest quality, most compassionate care to patients in the New York metropolitan area, nationally and across the globe. The hospital needed to track data from electronic health records, pharmacy dispensing systems and other sources to see if drugs were being diverted for potentially illegitimate purposes. They used a data platform built on ML to safeguard controlled substances and other medications, helping to reduce opioid diversion.

"We know from looking at CDC statistics that at certain points in time, hospitals have been a primary source of some drugs on the street," says Jennings Aske, senior vice president and chief information security officer at NewYork-Presbyterian. "We have an ethical and moral obligation to not simply rely on manual auditing, but to build a platform to help catch potential diversion."

NewYork-Presbyterian built a machine-learning driven medication analytics platform to track data from electronic health records (EHRs), Electronic Prescription of Controlled Substances (EPCS) platforms, pharmacy dispensing systems and other sources, to guard against the diversion of these medications. For example, the platform will immediately alert NewYork-Presbyterian if a physician prescribes a controlled substance to a patient who isn't in the care of the hospital, or if a pharmacy technician uses an automated dispensary cabinet more often than his or her peers.

Machine learning is the power behind these successful programs, and countless others at organizations around the world. How could your organization benefit from getting more value from your data? Learn more about how Splunk can help unlock the potential of your data with machine learning.

Learn More



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