



TRANSFORMING STUDENT AND BUSINESS OUTCOMES THROUGH DATA

Cludera Brings the Power of Big Data and Predictive Analytics to Higher Education Institutions

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- Key Higher Ed Use Cases**
- -Student Recruitment and Enrollment
 - Track Progress and Identify Gaps
 - Student Retention and Success
 - Manage Facilities and Equipment
 - Create Personalized Experiences for Nontraditional Students
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For higher education institutions, competitive pressures demand new data and analytics strategies that drive both business improvements and student success. Solving key challenges around issues such as evolving funding dynamics, student acquisition and retention, resource restraints and allocation, and most importantly the student journey, all require an institutional commitment to data analytics.

Higher ed must look beyond legacy systems and manual approaches that have proven to be insufficient, as spreadsheets and sprawling printed reports are cumbersome and on their own don't offer the full view needed to drive intelligent and meaningful analytics. Moreover, point solutions and data silos (workloads running independently in data centers, private, and public clouds) often lead to disconnects between the insights generated by those responsible for institutional research (IR) and the more granular, departmental views, getting in the way of good decision making.

Additionally, sole reliance on traditional business intelligence (BI) tools limits institutions to descriptive analytics capabilities (what happened) versus the possibilities presented by a predictive solution (why it happened and what may happen in the future).

A Platform Approach to Data-Informed Decisions

To overcome these challenges, a better approach is needed: an enterprise data platform. With an enterprise data platform, institutions can ingest data from any source, break through departmental and technological silos, and perform descriptive and predictive analytics in order to discover which services and strategies might best support business and student success, now and in the future.

With a complete data set, and robust tools for exploring that data, colleges and universities, for example, can query whether and to what extent tutoring would drive student success and promote student retention in an upper-level class. With predictive modeling and machine learning capabilities, researchers can model the impact of scholarships, tuition discounts, and

Why Cloudera

Cloudera Data Platform enables organizations to effectively execute their data and analytics strategy to address current and evolving customer expectations.

EDGE TO AI ANALYTICS

Analytics for the complete data lifecycle combined in a single platform, eliminating the need for costly and cumbersome point products.

DATA SECURITY & COMPLIANCE

Maintains consistent data security and governance across all environments.

HYBRID AND MULTI-CLOUD

Delivers the same data management capabilities across all clouds and data centers.

100% OPEN SOURCE

Open compute and open storage ensures zero vendor lock-in and maximum interoperability.

other interventions on individual students, building up data-informed decision making as the bedrock of university strategy and policy.

Empowered by an enterprise data platform, IR can set the tone for the university, delivering timely and accurate insights through existing BI investments like Tableau. Or grant self-service access to the platform itself in order to enable departments to collaborate and take key steps in support of improved student and business outcomes.

Key Business and Student Use Cases

AN ENTERPRISE DATA PLATFORM IMPACTS A NUMBER OF KEY USE CASES	
Admissions/Enrollment Management	Determine the likelihood of enrollment, better enabling the institutional change tactics for marketing and conversion.
Student Success/Early advisement	Deploy predictive analytics to enable proactive interventions that can identify and address critical students in need while helping institutional equity goals.
Institutional Financial Efficiency	Capture and ingest data from disparate sources to provide insights into course-level revenues, costs, enrollment patterns, and other data points for optimal resource allocation.
Student 360	Empower departments within the university to provide a unified university experience to each student, from prospective students to donating alumni.
Learning Analytics	Predict and communicate the likelihood of a student successfully passing courses, implement successful course sequencing for students, and identify pathways for academic success.
Facilities and Admin cost reimbursement:	Utilize data from disparate sources to track reimbursable F&A costs such as IoT utility systems, machine data, hazardous waste disposal fees, and staff compliance costs while creating auditable records for federal reimbursement.

Cloudera CDP, An Enterprise Data Platform for Higher Ed Institutions

The Cloudera Data Platform (CDP) offers colleges and universities a powerful means to capture and analyze all of their data in a single platform that operates across hybrid and multi-cloud environments.

Built for the enterprise, CDP empowers institutions to manage and secure the end-to-end data lifecycle – collecting, enriching, and analyzing data, enabling experimentation while delivering predictive insights through AI and machine learning deployed at scale. All with the integrated data security and governance required to eliminate risk and ensure compliance by preventing unauthorized access to sensitive data as different departments apply various analytics.

By breaking down institutional silos, and applying powerful analytic and predictive tools across the full spectrum of the institution's data, CDP makes it possible to generate the powerful business insights that drive student success and ultimately support stronger business outcomes across the institution.

“Cloudera offers us the convenience of integrating all the tools and capabilities into one platform. This means I don’t have to hire multiple providers for multiple functions. Other universities try to add more and more technologies, but still struggle. We needed a solution that was easy, inexpensive, and offered good value in the long-run – and Cloudera makes this possible.”

Mary Eichin, Assistant Director for Technology, FSU Office of Distance Learning

About Cloudera

At Cloudera, we believe that data can make what is impossible today, possible tomorrow. We empower people to transform complex data into clear and actionable insights. Cloudera delivers an enterprise data cloud for any data, anywhere, from the Edge to AI. Powered by the relentless innovation of the open source community, Cloudera advances digital transformation for the world’s largest enterprises.

Learn more at cloudera.com

Higher Ed Spotlight - Boosting Student success with big data

One of the nation’s elite research universities, Florida State University (FSU) needed better insights into its institutional data. With a Learning Management System reporting on over 40,000 students and 3,000 instructors, the FSU Office of Distance Learning’s (ODL) limited data technology staff needed a better understanding of important metrics like retention rate and graduation rate, in order to stand out in a competitive landscape.

With data in silos (spreadsheets, compressed server logs, database output, and manually piece data together to create reports) ODL struggled to do advanced analytics in order to drive effective business outcomes.

By implementing Cloudera’s platform, ODL can now identify patterns in the LMS data, helping them identify students that are at risk of falling behind or failing in a course. Algorithms such as Logistic Regression in Apache Spark ML are used to predict if students will pass a course or not. The university can now also monitor cheating, thereby ensuring the quality of its graduates.

Now, departments across the university rely on reporting from the ODL technology team. With Cloudera’s tools, the data can be used to build insightful use cases and interpret trends, as well as to create custom reports that help guide departmental decision-making.

Contact [Kyle Petrosino](#) to learn more about how Cloudera Data Platform [empowers institutions](#) to improve business and student outcomes.