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Client Success Story

Analytics and BI for a Private R1 University

Analytics and Business Intelligence for a Private R1 University

Implementing a comprehensive BI tool and program dashboards for a private R1 higher ed institution.

✓ Background

A private not-for-profit R1 University, composed of the undergraduate college and the graduate school, engaged the Entigence analytics team (acquired by Deloitte Consulting in August 2021) to provide higher education analytics expertise and implement two key projects: 1) Assess the Business Intelligence (BI) technology stack and recommend tools to automate the creation of an internal College Fact Book for the undergraduate college; and 2) Create operational and external Program Dashboards and visualizations to support the graduate school.

⚒ Process

The College Fact Book contained over 250 visualizations displaying trends for applications, admissions and enrollment for the undergraduate college that were previously developed manually in Excel. The team conducted a detailed assessment of the university's BI technology stack as well as the reporting requirements for the Fact Book to recommend tools for automating the process. The team also performed a fit-gap analysis of the existing database models, designed new data models to capture various student information and developed the ETL (Extract Transform Load) process to integrate the data.

For the Graduate Program Dashboards, requirement gathering sessions were conducted with key stakeholders and program leaders to understand the data and reporting needs of the graduate school and the individual programs. The requirements were implemented to create interactive, public-facing program dashboards to provide prospective students with data to analyze trends and statistics on admissions, enrollments, degree time to completion, attrition rates, and average time-to-degree. The dashboards automated aggregations and analysis while providing dynamic reports used to replace PDF versions.

Additionally, the team delivered a suite of operational dashboards that integrated data silos to provide program leaders a holistic view of each graduate program and student. The operational dashboards integrated data from various sources and systems. The team created the data layer and ETL processes, the operational dashboards and visualizations, and a predictive analytics framework to forecast program cohort sizes and attrition rates.

🚀 Impact

The institution now has a comprehensive BI tool to fit their reporting needs for the College Fact Book and has recommendations for leading practices in report design.

The Graduate Program Dashboards integrated data silos to improve institutional analytics.

🚀 Impact *(cont'd)*

In addition, the predictive analytics framework allowed the institution to forecast future cohort sizes and attrition rates.

Highlights of other outcomes include:

- Automated the development of the Fact Book that saved over three months of recurring manual effort spent by the data analysts in consolidating the undergraduate data across multiple systems

- Developed a scalable framework for the Fact Book to seamlessly incorporate ongoing dynamic undergraduate data

- Integrated data from legacy and external systems into data layer built for centralized reporting and analysis

- Developed performance optimized and scalable database schemas and over 12 ETL processes for the Graduate Program Dashboards

- Developed over 15 operational graduate dashboards with over 100 visualizations and metrics

For more information, please contact us.

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