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From Academy to Industry

an experimental Student Journey

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“**Education** is, today at least, a black box.

Society invests significantly in primary, secondary, and higher education. Unfortunately, **we don't really know** how our inputs influence or produce outputs.

We don't know, precisely, which academic practices need to be curbed and which need to be encouraged.”

George Siemens





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Fighting to attract and retain the best students

Find ways to gain competitive advantage

Trends and Challenges



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The Institution Perspective



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The Student Perspective



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The competitive advantage is there to be found

hidden in the data that universities already have

Road to a comprehensive Student Journey



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Uncertainty



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1



Information Gathering



Shortlist



Application

Development



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Booking & Course Registration



Academic Experience



Career Services

2

Go-to-Market



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Alumni Network



Career Counseling



Professional Experience

3

Road to a comprehensive Student Journey



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Uncertainty

1



Development

2



Go-to-Market

3





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What if Universities could provide an experience

as personalized as your Netflix account?



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HOW?

Educational Data Mining & Learning Analytics

Educational Data Mining



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Educational Data Mining can be defined as a science focused on developing new tools and algorithms for discovering data patterns using University's data



Learning Analytics



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Learning Analytics focuses on applying tools and techniques at larger scales in instructional systems mixing data from several sources



Student Journey: an Analytical Approach



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Information Gathering
Improve Targeted Marketing
Use Right Channel

Shortlist
Competitors Analysis
Influential Factors Analysis

Application
Smart Students Selection
Employability Analysis

Booking & Course Registration
Propensity to miss payment
Course/Student Best Match

Academic Experience
Propensity to Drop-off
Likelihood to Succeed

Career Services
Best Matching Industry
Students Segmentation

Go-To-Market
Social Network Analysis
Sentiment Analysis
Student Satisfaction Study
University Brand Recognition



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Use Case: a Performance Analysis



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Model	Predictive model to estimate Propensity to Complete the Course
Goal	Predict yearly students with higher and lower propensities to complete the course they are enrolled in
Universe	Students enrolled in the Informatics Engineering course between 2007 and 2014
Software	SAS Enterprise Miner via SAS OnDemand for Academics
Technique	Logistic Regression
Main Outcomes	73% AUC ROC
Implementation Details	(1) Identify main factors influencing students success/failure (2) Invest in support for students with lower propensities (3) Create a career path for students with higher propensities

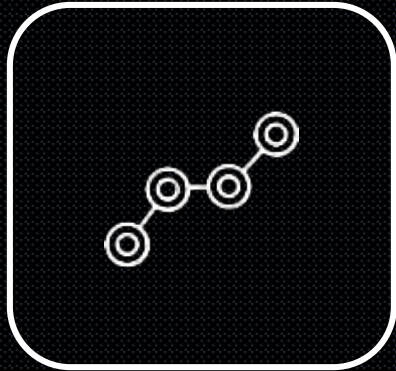


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Our goal is to deliver an integrated offering...

... to help students throughout their academic journey

Some Expected Deliverables



Potential Advantages



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- More likely to find the best-suited study program
- Excellent and personal service experience
- Greater chance of student success



- More effective by being able to focus on the students that need counseling
- Insight into the relation between student behavior and student success



- More student success (often leading to financial gains)
- Better reputation through better service experience
- Lower costs to give better advice and more targeted services
- Optimized processes, policies and service based on insights in student behavior
- Make a necessary change - over the next couple of years, data-driven will become the norm



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Thank you!