



# Using advanced analytics to improve student retention

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## FAQ's

- Is this session being recorded? Yes
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## Predictive Analytics for Smarter Business



- Premium, accredited partner to IBM specialising in the SPSS Advanced Analytics suite.
- Team each has 15 to 20 years of experience working in the predictive analytic space - specifically as senior members of the heritage SPSS team

# What do we mean by 'Predictive Analytics'?



**Predictive analytics** encompasses a variety of techniques from **statistics** and **data mining** that analyze current and historical data to make predictions about future events

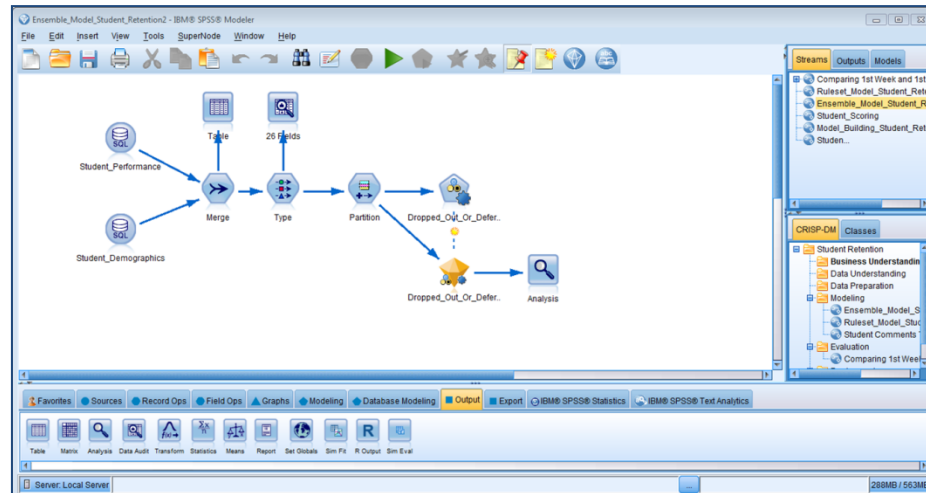


Analysis of **structured** and **unstructured** information with mining, predictive modeling, and 'what-if' scenario analysis.

# Student Retention Powered by IBM SPSS Modeler



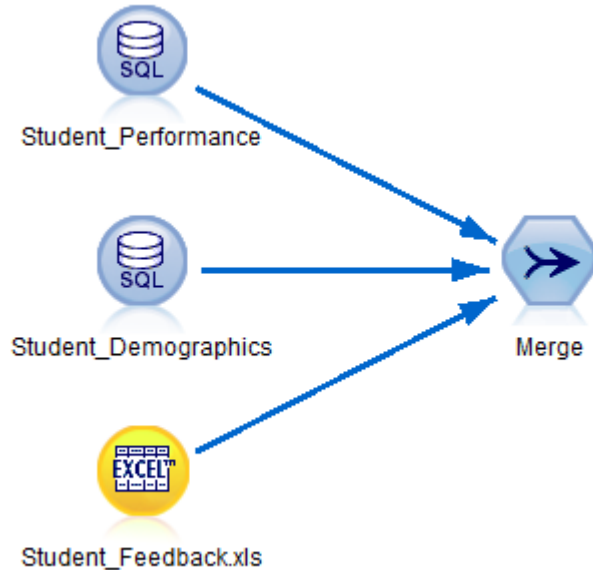
- Powerful, industry-leading analytics platform
- Intuitive, graphical interface used by analytical experts and non-experts alike
- A one-stop shop for:
  - Reading and consolidating data
  - Transforming and manipulating key fields
  - Uncovering patterns and predictive models
  - Integrating results with operational and reporting systems



# Student Retention Powered by IBM SPSS Modeler



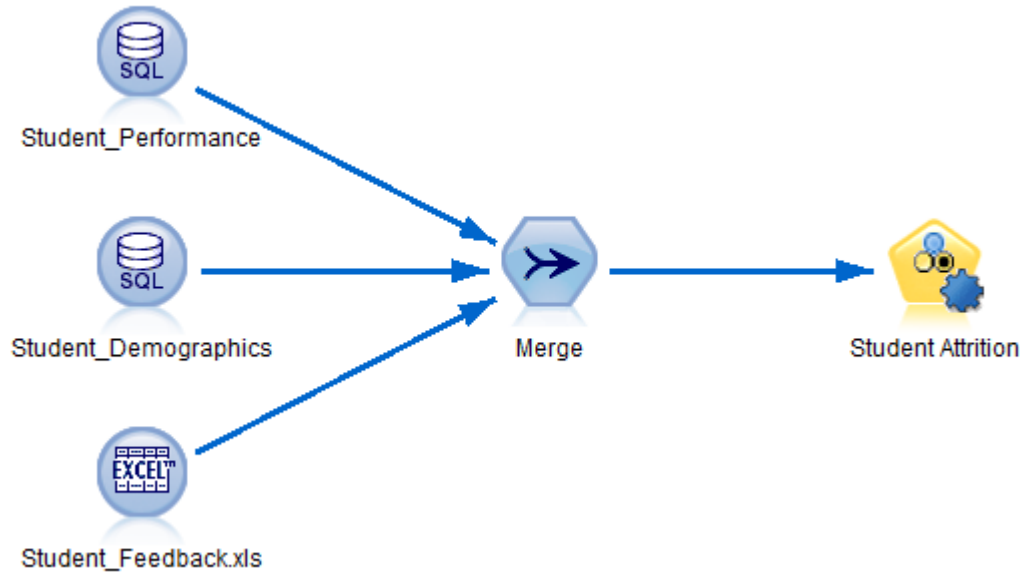
- Read and consolidate data from multiple formats simultaneously



# Student Retention Powered by IBM SPSS Modeler



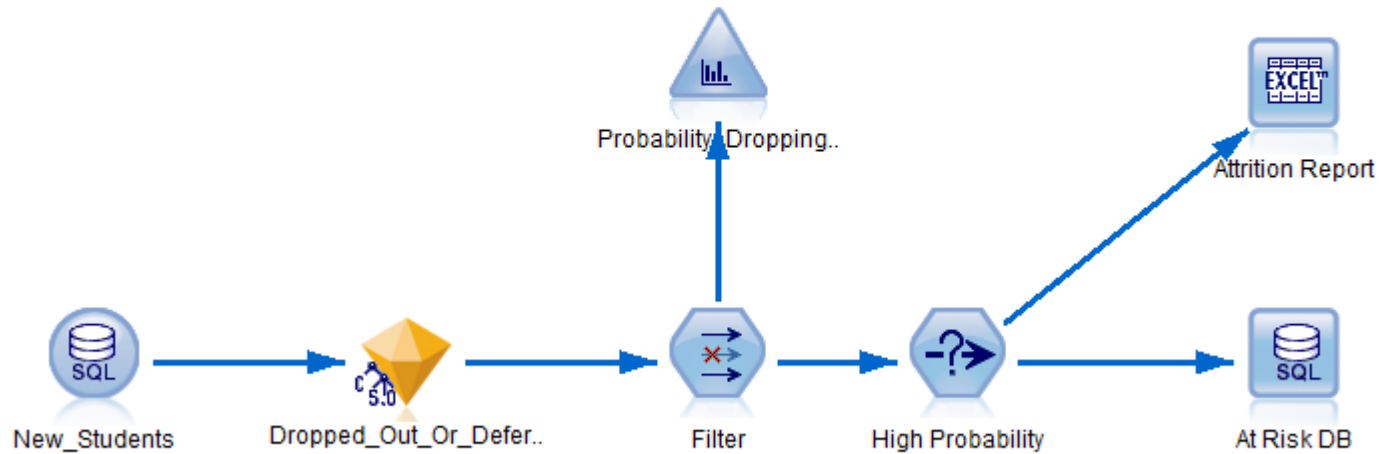
- Automatically build predictive models



# Student Retention Powered by IBM SPSS Modeler



- Export predictions directly

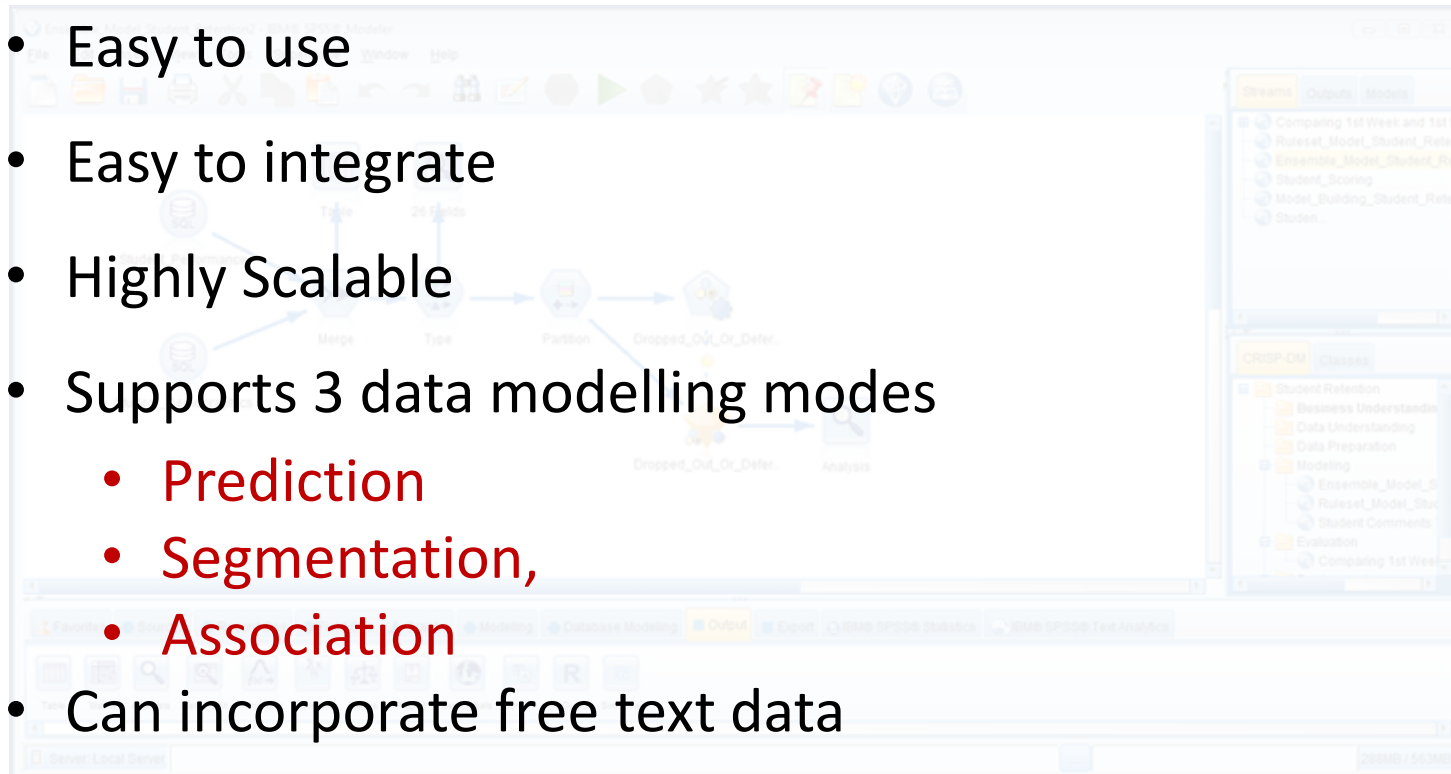




# Student Retention Powered by IBM SPSS Modeler



- Easy to use
- Easy to integrate
- Highly Scalable
- Supports 3 data modelling modes
  - Prediction
  - Segmentation,
  - Association
- Can incorporate free text data



# Student Retention Powered by IBM SPSS Modeler

Interactive Workbench - Comments

File Edit View Generate Categories Tools Help

Build Extend Score Display

Category	Descriptors	Docs
All Documents	-	597
Uncategorized	-	0
No concepts extracted	-	0
behind	1	198
difficulty	3	399
english	3	166
math	2	297
payment	1	44
progression	2	141

Extract Map Display

15 concepts

Concept	In	Global	Docs	Type
student		457 (23%)	457 (77%)	<Student>
math class		296 (15%)	296 (50%)	<Math>
difficulty		238 (12%)	238 (40%)	<Difficulty>
school		228 (12%)	228 (38%)	<Unknown>
behind in		198 (10%)	198 (33%)	<Behind>
hard time		161 (8%)	161 (27%)	<Difficulty>
class progress		115 (6%)	115 (19%)	<Progress>
english class		83 (4%)	83 (14%)	<English>
english		82 (4%)	82 (14%)	<English>
struggling		44 (2%)	44 (7%)	<Difficulty>
pay		44 (2%)	44 (7%)	<Finance>
progression		26 (1%)	26 (4%)	<Progress>
english course		1 (0%)	1 (0%)	<English>
math courses		1 (0%)	1 (0%)	<Math>
courses		1 (0%)	1 (0%)	<Unknown>

Category Bar Category Web Category Web Table

# Docs

- 250
- 200
- 150
- 100
- 50
- 0

# Shar...

Comments (436)	Categories
1 Student is having difficulty with English course.	difficulty english
2 Student is having difficulty in English and math courses. Also, struggling financially to pay for courses.	difficulty english math payment
3 Student is having difficulty with math class.	difficulty math
4 Student is having difficulty in both English and Math classes.	difficulty english math
Student is having difficulty in English and math classes. Also, struggling financially to pay for school.	difficulty english

- Can incorporate free text data

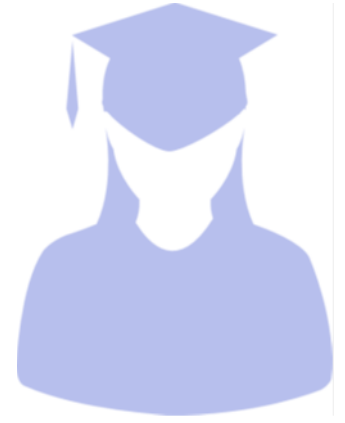
# Timely Predictions for Student Retention

- Predicting Attrition within **First Semester**
  - Academic Admission Scores (A Level points etc.)
  - Gender
  - Nationality
  - Days attended first 2 weeks
  - Distance from residence to campus
  - Faculty
  - Mode of study (Full Time, Part Time, Sandwich etc.)



## Timely Predictions for Student Retention

- Predicting Attrition within **First Year** (After first semester)
- Additional Fields
  - Semester grades
  - Contact hours
  - Attendance Record
  - Tutor notes (free text)





Lets look at a specific example...



Find out more about SPSS Modeler

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## IBM SPSS Modeler

IBM SPSS Modeler is an extensive predictive analytics platform that is designed to bring predictive intelligence to decisions made by individuals, groups, systems and the enterprise. By providing a range of advanced algorithms and techniques that include text analytics, entity analytics, decision management and optimization, SPSS Modeler can help you consistently make the right decisions—from the desktop or within operational systems. IBM® SPSS® Modeler is a powerful, versatile data mining workbench that helps you build accurate predictive models quickly and intuitively, without the need for programming.

## What are the main applications of IBM SPSS Modeler?

Many of the UK's best-performing businesses, academic institutions and national and local government agencies rely on IBM SPSS Modeler to unlock the value of their enterprise data, improve business processes and make more informed decisions in areas such as:

- Customer intimacy/customer experience management
- Fraud and risk mitigation
- Human capital management/resource planning

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### Related blog posts

- > [Getting started with predictive net promoter scores](#)
- > [Getting Started with IBM SPSS Modeler](#)
- > [Applying predictive analytics in the real world](#)
- > [Predictive analytics in one hour - a no-nonsense guide](#)
- > [Using advanced analytics to improve student retention](#)



## Working with Smart Vision Europe Ltd

- As a premier partner we sell the IBM SPSS suite of software to you directly
  - We're agile, responsive and generally easier to deal with
- As experts in SPSS / Analytics / Predictive Analytics we will
  - deliver classroom training courses
  - offer side by side training support
  - offer “skills transfer” consulting
  - run booster and refresher sessions to get more from your SPSS licences
  - Give no strings attached advice
- We are a support providing partner so you can source your technical support directly from us (identical costs to IBM)
  - We offer telephone support with real people as well as web tickets / email queries
  - We offer “how to” support to help you get moving on your project quickly



## Options to get started...

**Student Retention (Starter Pack)**



**Single client software tools including text mining, set up, training & first project deployed**

**Student Retention (Enterprise Automation Pack)**



**2 x client plus server software, including text mining, automation, set up, training & first projects**

**Student Retention (Enterprise Platform)**



**Full enterprise deployment including predictive analytics, client server, full automation, database technology etc.**



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Thank you