

Data Analytics in Finance

Enormous amounts of data are created every day by consumers, firms and governments. Many industries, including finance, are becoming increasingly data-driven in their decisions. But the data, especially in such huge quantities, doesn't speak for itself. Deriving true information and insight requires careful analysis and solid models.

We will learn to build and interpret models to make better data-driven decisions based on an in-depth understanding of the strengths and weaknesses of key quantitative models (linear, non-linear, time-series, cross-sectional, probit, machine learning, predictive, event studies, difference-in-difference, etc.) used in the three primary areas of finance: corporate, investments, and macroeconomics. This process will force us to discuss statistical issues such as endogeneity, omitted variables, sample size, sample selection, causation, significance, etc.

FIN 579
Spring 2020
Days & time
TBD

"The most valuable commodity I know of is information."

Gordon Gekko

Objective

The course is designed to equip you with tools to answer questions like:
 How can we measure the impact of a new law on firm value? What is the impact of changing leverage or dividends on firm value? How can we predict credit delinquency? Which indicators predict economic growth? How can we test the robustness of a trading strategy?

Audience

The course is relevant for MBA students with interests in:

- ◆ Corporate finance
- ◆ Investments
- ◆ Consumer finance
- ◆ FinTech
- ◆ Consumer choice
- ◆ Public policy
- ◆ Risk management

Teaching Method

Course material will be delivered through lectures, case studies, and guest lectures (Tableau, Amazon). Projects will replace exams.

Each week will be centered on a theme. Models specific to the question will be analyzed and implemented using real data.

The course requires familiarity with finance, R, and statistics.

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