Georgia Institute of Technology

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Computational Investing, Part I

Introduction and Overview

Find out how modern electronic markets work, why stock prices change in the ways they do, and how computation can help our understanding of them. Learn to build algorithms and visualizations to inform investing practice.

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Course Objectives

- Understand electronic markets.
- Understand market data.
- Write software to visualize.
- Write software to discover.
- Create market simulator.

Who This is For

- Must be interested in stock markets.
- Student 1: Non-technical person:
  - You are welcome!
  - Can watch lessons, take quizzes, but...
  - No certificate without completing projects.
- Student 2: Technical person,
  - Undergraduate level programming required.
  - Certificate if quizzes & projects completed.

Course Logistics

- 8 weeks, 2 modules per week.
- About 5 to 10 short videos per module.
- Short quizzes throughout.
- Projects in Excel and Python.
- Students will grade each other.

About the Instructor

- PhD in Robotics/Machine Learning.
- Professor at Georgia Tech.
- Students: AQR, Citadel, GS, MS
- Hedge fund quant.
- Founder of Lucena Research.

Course Resources

- wiki.quantsoftware.org
- “Active Portfolio Management” by Grinold & Khan
- “All About Hedge Funds” by Jaeger

Next Steps

- Visit course wiki to review course objectives and “getting started.”
- Visit course forum to ask questions you might have about the course.
- wiki.quantsoftware.org