Generative AI for Finance
Spring 2026

Instructor

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Meeting Schedule

TTh 12:30 – 2:00
3/17/2026 – 4/23/2026

Special session:

- Saturday, March 21, 9:00-12:00 - optional Python session

All sessions will be in McNair 212, including the special session.

Learning Objectives

1. How to use AI with code-execution tools to perform financial analysis, handle data, and generate visualizations and reports
2. How to use AI for portfolio optimization and discounted cash flow valuation of companies
3. How to connect AI to external data sources and tools (MCP servers, Jupyter notebooks, Excel)
4. How to automate financial workflows with reusable, specialized prompts (skills)
5. How to verify and validate AI-generated financial analysis
6. How to use retrieval-augmented generation to ground AI in financial documents
7. How to build financial AI applications such as chatbots and agents
8. How AI can be used to classify the sentiment of news and earnings calls for trading

Course Description

The course is about financial applications of generative AI. We will discuss and use current AI tools but also discuss broader concepts of AI and how they relate to finance. The course will be "hands-on." We will be working in class on laptops each day.

We will use Anthropic's Claude throughout the course. Anthropic has made a number of important innovations that the rest of the industry has followed, including a protocol for connecting AI to tools (Model Context Protocol), coding agents that can execute terminal commands (Claude Code), and code execution in a virtual machine (Claude Cowork). Claude has also generally led all other models in coding tasks for the past two years. We will also briefly look at ChatGPT, Gemini, and other large language models.

The course consists of the following 8 modules. A rough schedule is that we will do one module per week in each of the first three weeks, then two modules per week in weeks 4 and 5, then do the last module in week 6.

1. AI as a financial tool
2. Portfolio optimization and company valuation
3. Connecting AI to data and tools
4. Automating financial workflows
5. Verifying AI-generated analysis
6. Working with financial documents
7. Building financial AI applications
8. AI in trading and markets

Grading

Grades will be based on six group assignments (15% each) and peer assessments (10%). Groups can consist of no more than five students. Each assignment consists of multiple exercises and will take a nontrivial amount of time to complete. Do not wait until the last minute to get started.

The assignments are posted on Canvas. An assignment is due each Tuesday at 11:59 pm beginning March 24 and ending April 28 (during exam week).

Claude Accounts

Each student will be reimbursed for a Claude Pro account ($20 per month). The Pro account provides access to Cowork, Claude Code, and the Claude plug-in for Excel, all through the Claude Sonnet model.

Honor Code

The Rice University honor code applies to all work in this course.

Disability Accommodations

Any student with a documented disability requiring accommodations in this course is encouraged to contact me outside of class. All discussions will remain confidential. Any adjustments or accommodations regarding assignments or the final exam must be made in advance. Students with disabilities should also contact Disability Support Services in the Allen Center.