

MGMT 675

AI-Assisted Financial Analysis



Instructor

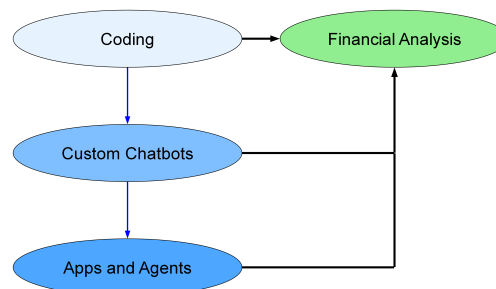
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Course Overview

The emergence of generative AI has been reshaping financial workflows and careers. This course prepares MBA students to leverage AI for financial analysis. The course is organized around the following principles:

1. We should treat AI as a colleague, collaborator, and advisor, as well as an assistant.
2. Large language models (LLMs) cannot be relied upon to do arithmetic, so coding (Python) is essential.
3. For critical operations, we should save tested code as an app.
4. To use a chatbot for critical operations, we should configure the app as a chatbot tool, creating an AI agent.

The learning/building progression is captured in the following diagram. Chatbots are a special type of app, and agents are chatbots with tools. AI can write the code to create these things, and there are also "no code" options available (Custom GPTs at OpenAI).



AI Tool

We are going to use Anthropic's Claude for the course. Claude Opus and Sonnet are the best coding LLMs. Also, Anthropic recently released Excel integration, so Claude can generate fully functioning, nicely formatted Excel workbooks. In addition, Anthropic created the Model Context Protocol (MCP) and has recently made it simpler for users to configure MCP connections in Claude Desktop. Finally, we will use Claude Code, which is a very powerful coding agent.

Evaluation

Grades will be based on four elements (25% each). The first three are **group projects**.

1. AI + Python cost of capital exercise: calculation, visualization, report generation
2. Cost of capital app
3. Cost of capital agent
4. Seated exam with AI allowed

For each of the group projects, the deliverables are:

- A chat/app/agent
- A two-page Word doc explaining development and use

Honor Code

The Rice University honor code applies to all work in this course. Use of generative AI is of course permitted.

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.

Schedule

Week 1: Introduction

- Collaborating with AI: Claude + Excel for valuation
 - Case study: [Valuing Walmart 2010](#)
- Corporate implementations of AI
 - Case study: [Implementing AI at Deloitte](#)
 - Other reading: [State of AI in Business 2025](#)
 - Other reading: [Generative AI Reshaping Teamwork and Expertise](#)

Week 2: Vibe Coding for Data Analysis

- Claude Desktop, Google Colab, and Claude Code
- Cleaning, sorting, filtering and aggregating
- Data visualization
- Generating Word docs and PowerPoint decks

Week 3: Vibe Coding for Financial Analysis

- Retirement planning
- Mean-variance portfolio optimization
- Mutual fund performance evaluation

Week 4: Custom Chatbots

- API calls
- System prompts, RAG, and fine-tuning
- Custom GPTs
- Building a custom chatbot as a Streamlit app
- Group project 1 due

Week 5: Apps and Agents

- Retirement planning app
- Asset allocation app
- Configuring apps as tools for chatbots
- Group project 2 due

Week 6: Deployment and Database Agents

- Alternatives for deploying apps/chatbots/agents
- Deploying databases
- Creating database agents
- Wrap-up
- Group project 3 due