

## Foundations of AI Agents

Syllabus (2026)



**Time:** Second Half of Spring 2026, starting on March 31  
Class Meets on Tuesdays, 9AM to 11:50AM

**Instructors:** Professor Srikanth Jagabathula (sjagabat@stern.nyu.edu)  
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**TA:** Tony Dong (cd3504@nyu.edu)  
TA Office Hours: Fridays 12:30PM to 1:30PM, at KMC 8-161

**Course Summary:** AI is rapidly transforming the business world, and understanding the language of AI and the fundamentals of how it works is increasingly becoming table stakes across many jobs. Agentic AI extends large language models (LLMs) beyond passive chatbots into active agents capable of taking actions in the real world to improve business processes and workflows. In this course, we explore the underlying principles of building effective AI agents. Students will learn to make design decisions in order to architect better agent AI solutions. The course culminates in a demo day where students present the AI agents they built to solve business problems of their choice.

**Course Format:** We are planning for a highly interactive course format. Students should bring a laptop to class and expect that a significant part of the course will be in a hands-on, lab format.

### **Course Contents:**

#### *Day 1: Building an AI agent*

What is an AI agent, how to build an AI chatbot, tool calling, how to build a working AI agent, JSON, programming via system prompts, how LLMs work, model tradeoffs, stochasticity and temperature, the value of orchestrating an agent.

#### *Day 2: Agent architecture*

Agent design template, agent architecture, system prompt design, hard-coded vs. LLM-determined design, building more complex workflows, multi-agent architectures.

#### *Day 3: The power of agentic AI*

Demonstration of the power of agentic AI, how did agentic coding become so good recently, building a frontend for the agent, the MBA as a vibecoder.

#### *Day 4: Enterprise agents and evaluation*

The context size challenge, embeddings, RAGs, how to evaluate the performance of an AI agent.

#### *Day 5: Deploying AI agents*

Organizational challenges in deploying agentic AI systems, panel with industry experts.

#### *Day 6: Demo day*

Students, bring out your best work!

Note: The precise course contents are subject to change. Given the fast pace of change in the world of AI, we might make last minute changes to the list of topics covered.

**Project:** Students will start working on their project on day 1 and will keep working it until day 6 (demo day). The project is a big part of the class. There will be weekly deliverables.

Week 1: Students submit the business problem they plan to tackle with the project.

Week 2: Students submit their proposed agent architecture and early prototype.

Week 3: Students submit their prototype including front-end design.

Week 4: Students submit their agent evaluation.

Week 5: Students submit and present their demos. The demo should include an n8n AI agent backend plus a front-end.

Week 6: Students submit peer reviews of 2 other demos.

Every weekly submission must include a 1-page pdf explaining the work they are submitting. For the week 1 deliverable, a 1-page pdf with the proposed project is the only deliverable. Students are encouraged to use AI to summarize their work into the 1-page pdfs.

**Grading:** The grading scheme will be as follows:

In-class participation: 20%

Weekly deliverables for weeks 1-4: 10% each

Demo day deliverable plus peer reviews: 40%

Note: AI will be used to analyze and grade many of the deliverables.

**Course Requirements and AI policy:** There are no formal pre-requisites. But students need to be ready and willing to do some coding if needed. Students who have a limited coding background are allowed to take the course as utilizing AI for coding assistance will be allowed. Use of AI is highly encouraged in all aspects of this course.

## **SCHOOLWIDE RULES AND GUIDANCE**

### **Student Accessibility**

If you will require academic accommodation of any kind during this course, you must notify me at the beginning of the course (or as soon as your need arises) and provide a letter from the Moses Center for Student Accessibility (212-998-4980, [mosescsa@nyu.edu](mailto:mosescsa@nyu.edu)) verifying your registration and outlining the accommodations they recommend. For more information, visit the CSA website: <https://www.nyu.edu/students/communities-and-groups/student-accessibility.html>

### **Student Wellness**

Classes can get stressful. I encourage you to reach out if you need help. The NYU Wellness Exchange offers mental health support. You can reach them 24/7 at [212 443 9999](tel:2124439999), or via the “NYU Wellness Exchange” app. There are also drop in hours and appointments. Find out more at:

<http://www.nyu.edu/students/health-and-wellness/counseling-services.html>

### **Name Pronunciation and Pronouns**

NYU Stern students now have the ability to include their pronouns and name pronunciation in Albert. I encourage you to share your name pronunciation and pronouns this way. Please utilize this link for additional information: [Pronouns & Name Pronunciation](#)

### **Religious Observances and Other Absences**

NYU's [Calendar Policy on Religious Holidays](#) states that members of any religious group may, without penalty, absent themselves from classes when required in compliance with their religious obligations. You must notify me in advance of religious holidays or observances that might coincide with exams, assignments, or class times to schedule mutually acceptable alternatives. Students may also contact [religiousaccommodations@nyu.edu](mailto:religiousaccommodations@nyu.edu) for assistance.

NYU Stern is committed to ensuring an equitable educational experience for all students regardless of identity or circumstances and strives to recognize the obligations its students have outside of Stern. Please review all class dates at the start of the semester and review all course requirements to identify any foreseeable conflicts with exams, course assignments, projects, or other items required for participation and attendance. If you are aware of a potential conflict, please contact me as soon as possible to discuss any potential conflicts to determine whether/how they can be accommodated.

### **Inclusion Statement**

This course strives to support and cultivate diversity of thought, perspectives, and experiences. The intent is to present materials and activities that will challenge your current perspectives with a goal of understanding how others might see situations differently. By participating in this course, it is the expectation that everyone commits to making this an inclusive learning environment for all.