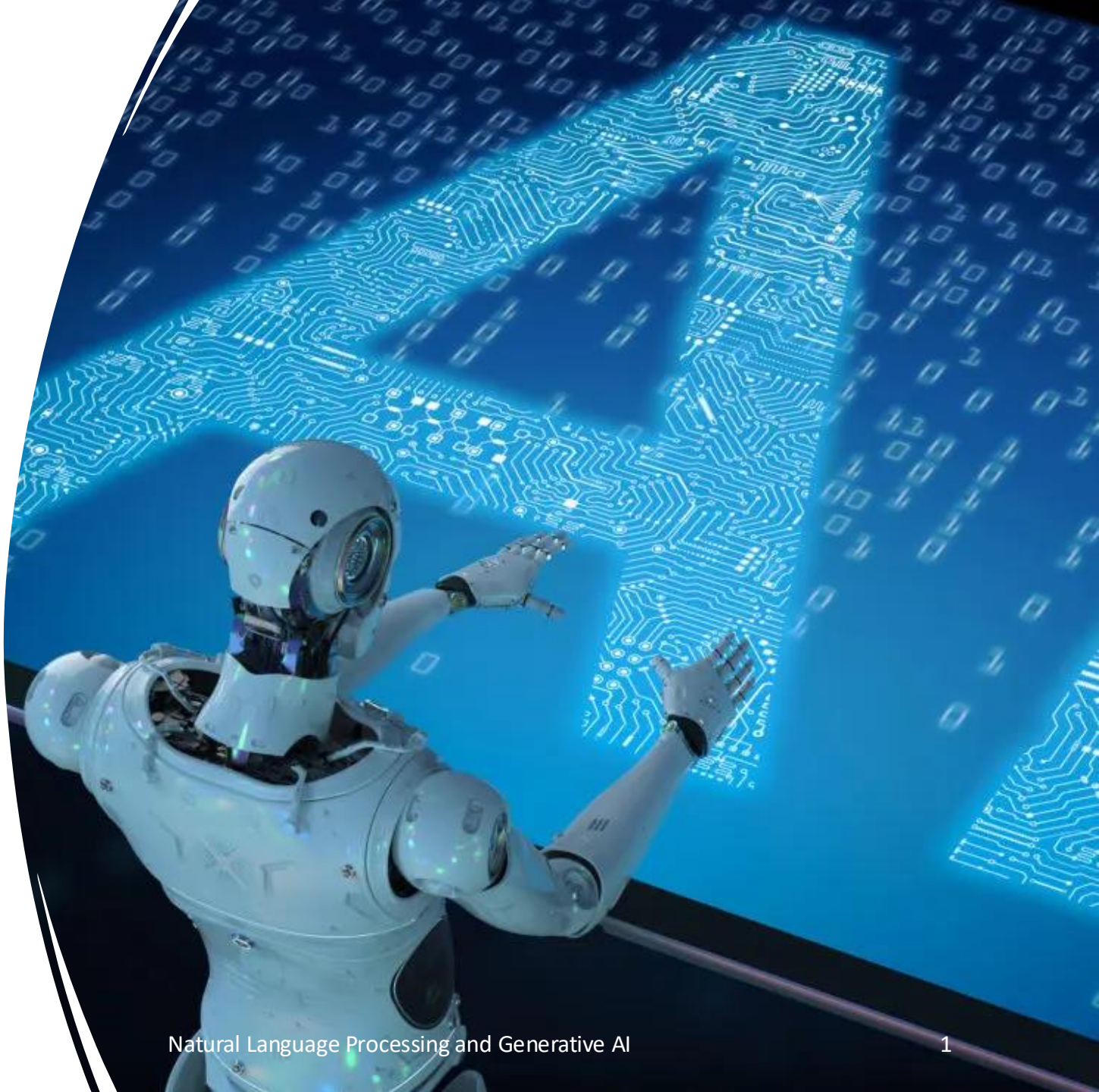
USC AI Minor Capstone Projects

TAC 459 Applied Natural Language Processing and Generative AI

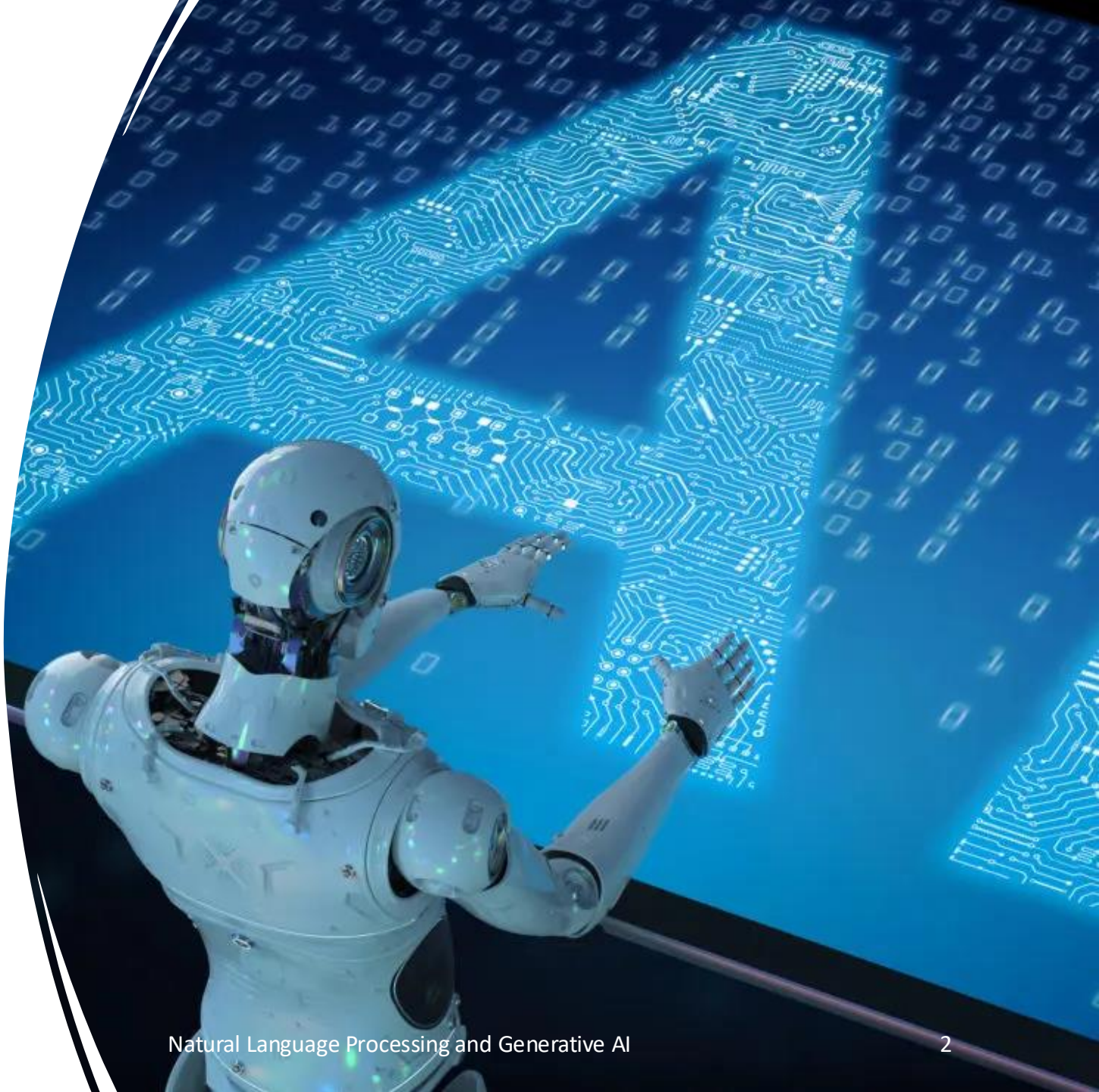
Instructors: Reza Jafarkhani, PhD
Allen Bolourchi, PhD, MBA

Mon-Wed 12-1:50PM
KAP 160



Capstone Projects

1. AI Company Overview
    - November 2 at 12PM, In Person
2. Capstone AI Products
    - December 11 at 5PM, In Person
    - To confirm no exam conflict for everyone



AI Company Overview

Track 1 | Team formation → company selection → in-class presentation

WEEK 1 · OCT 12–18

Form teams

Add names to the sheet; use Piazza and class to find members.

WEEK 2 · OCT 19–25

Select AI company

Add company name; **meet professor**; prepare preliminary slides.
- Schedule a meeting with the professor

WEEK 3 · OCT 26–NOV 1

Prepare overview

Build and rehearse the company presentation.

MILESTONE · NOVEMBER 2

AI Company Overview Presentation

Present in person; upload to Brightspace. After the overview, include one slide per capstone product idea.

AI Capstone Roadmap | Weeks 1–5

FALL 2026 • OCT 12 – DEC 14

Product ideation → MVP development

WEEK	DATES	FINAL CAPSTONE AI PROJECT	CAPSTONE DELIVERABLES
1	Oct 12–18	Form teams (same as AI Company Overview)	Same team as AI Company Overview.
2	Oct 19–25	Propose product ideas	• Develop initial product ideas for the team. • **Optional: Meet with the learning assistant to brainstorm product ideas.**
3	Oct 26–Nov 1	Prepare product idea pitches	—
◆	**NOV 2**	**1-minute pitch for each product idea**	—
4	Nov 2–8	Create product roadmap	Meet with the learning assistant to enhance your product roadmap and MVP.
5	Nov 9–15	Create one MVP for the team	Nov 9: Upload product roadmap to Brightspace.

AI Capstone Roadmap | Weeks 6–9

FALL 2026 • OCT 12 – DEC 14

Prototype selection → final presentation and submission

WEEK	DATES	FINAL CAPSTONE AI PROJECT	CAPSTONE DELIVERABLES
6	Nov 16–22	Enhance the MVP and start working on multiple prototypes. One MVP for the team, multiple prototypes after the MVP per each team.	Meet with the professor and share your MVP and Prototypes. Use class concepts for the MVP. You need to include an API call to a frontier model in the product for a feature.
7	Nov 23–29	Create prototypes in groups of two. For teams of seven, one group may have three members.	—
8	Nov 30–Dec 6	Select a prototype, enhance the prototype, and finalize it.	Dec 2: Upload Prototype code and design to Brightspace.
9	Dec 7–13	Finalize the product and prepare the final presentation.	—
◆	**DEC 11**	**Final Presentation: MVP Prototypes and Final Product**	• Upload presentation to Brightspace. • Format will be shared.
◆	**DEC 14**	**Final Submission**	• Upload five presentations to Brightspace. • Upload all project files. • Share your public GitHub repository.

Combined Roadmap | Weeks 1–4

Company overview and capstone side by side • Includes November 1 milestone

WK	DATES	AI COMPANY	COMPANY DELIVERABLES	CAPSTONE PROJECT	CAPSTONE DELIVERABLES
1	Oct 12–18	Form teams	• Add team members' names to the sheet. • Leverage Piazza and in-person classes to find team members.	Form teams (same as AI Company Overview)	• Same team as AI Company Overview.
2	Oct 19–25	Finalize selection of AI companies	• Add AI company name to the sheet. • Meet with the professor about your AI company. • Prepare a few preliminary slides to discuss your AI company.	Propose product ideas	• Develop initial product ideas for the team. • Optional: Meet with the learning assistant to brainstorm product ideas.
3	Oct 26–Nov 1	Prepare presentation	—	Prepare product idea pitches	—
◆	**NOV 2**	**AI Company Overview Presentation**	**• Include one slide per product idea after the AI Company Overview presentation.** **• Present in person in class.** **• Upload presentation to Brightspace.**	**1-minute pitch for each product idea**	**—**
4	Nov 2–8	—	—	Create product roadmap	• Meet with the learning assistant to enhance your product roadmap and MVP.
5	Nov 9–15	—	—	Create one MVP for the team	• Nov 9: Upload product roadmap to Brightspace.

Combined Roadmap | Weeks 5–9

Capstone execution, December 11 presentation and December 14 submission

WK	DATES	AI COMPANY	COMPANY DELIVERABLES	CAPSTONE PROJECT	CAPSTONE DELIVERABLES
6	Nov 16–22	—	—	Enhance the MVP and start working on multiple prototypes	• Meet with the professor and share your MVP.
7	Nov 23–29	—	—	Create prototypes in groups of two. For teams of seven, one group may have three members.	—
8	Nov 30–Dec 6	—	—	Select a prototype, enhance the prototype, and finalize it.	Dec 2: Upload Prototype code and design to Brightspace.
9	Dec 7–13	—	—	Finalize the product and prepare the final presentation.	—
◆	**DEC 11**	**—**	**—**	**Final Presentation: MVP Prototypes and Final Product**	**• Upload presentation to Brightspace.** **• Format will be shared.**
◆	**DEC 14**	**—**	**—**	**Final Submission**	**• Upload five presentations to Brightspace.** **• Upload all project files.** **• Share your public GitHub repository.**

AI Company Overview

Built on Innovation. Driven by Impact.



AI Company Overview

Project Overview

Select an emerging AI company and explain its product, technology, and market opportunity.

- Teams must have exactly 6 students. Only 4 teams can be 7.
- Company should preferably be a Y Combinator graduate
- If a non-YC company is selected, professor approval is required
- Company stage must be Pre-Seed, Seed, Series A, or Series B
- No Series C or later companies
- Focus on an emerging or less familiar Generative AI application

TEAM OF 6 | YC PREFERRED | EARLY STAGE

SELECTION CRITERIA

Company & Product Selection

Choose a company/product that demonstrates an interesting and differentiated use of Generative AI.

Focus on:

- Real-world applications
- Corporate or enterprise use cases
- New AI products or workflows
- Emerging technologies that the class may not already know

Please avoid:

- Photoshop-like AI tools
- Deepfake applications
- Basic or well-known NLP applications already covered in class

PRESENTATION CONTENT

What to Cover

Use the company as a case study to teach the class why the technology and use case matter.

1. Problem: What problem does the company solve?
2. Product: What does the product do?
3. Technology: How is Generative AI used?
4. Customers: Who are the target users or customers?
5. Use Case: How is the product used in practice?
6. Differentiation: What makes the company or technology novel?
7. Market: Why could this product or technology become important?
8. Example: Include 1–2 concrete GenAI examples or use cases.



FORMAT & OUTREACH

Presentation Format & Company Outreach

Prepare a concise overview and try to connect your class work with the real company.

Presentation Format

- 10-minute AI company overview
- 2-minute Q&A
- Presentation is in person
- All 6-7 team members must participate
- **[Final Capstone Product]** Add one slide per product idea to the end of the presentation + Elevator 1 minute pitch per idea.

Founder / Company Outreach

- Contact a founder, C-suite leader, or company employee
- If interested, they may attend class and listen to your presentation
- They may optionally give a 15–20 minute guest segment after your team's presentation



