

CS-639 – Interaction Design Studio

What is Interaction Design?

Professor Bilge Mutlu

Welcome!

TL;DR

- Welcome to **Interaction Design Studio**
- This is not a coding course.
- It's about shaping **experiences, interactions, and ideas**.
- You will learn to see, think, and communicate like a designer, mainly through **learning by doing**.

Introductions

My background

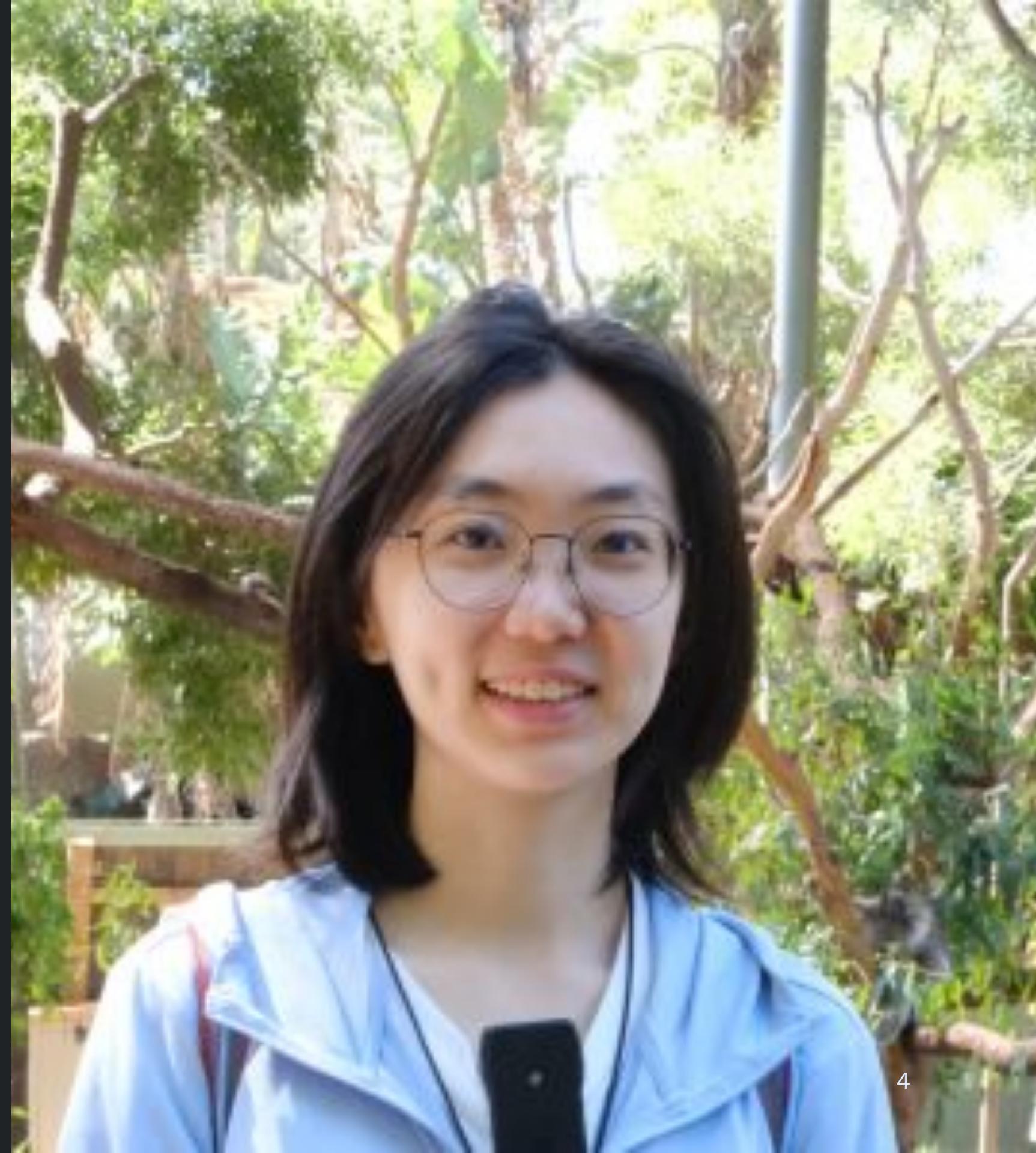
- Industrial & interaction designer
- Human-computer interaction researcher
- Professor of computer science



Introductions

Our teaching assistant

- First-year graduate student
- Designer, HCI researcher



How about you?

Your year, major + one thing **design-related you've done**

(E.g., Bucky, sophomore, cheerleading, taking a graphic design course)

Why This Course?

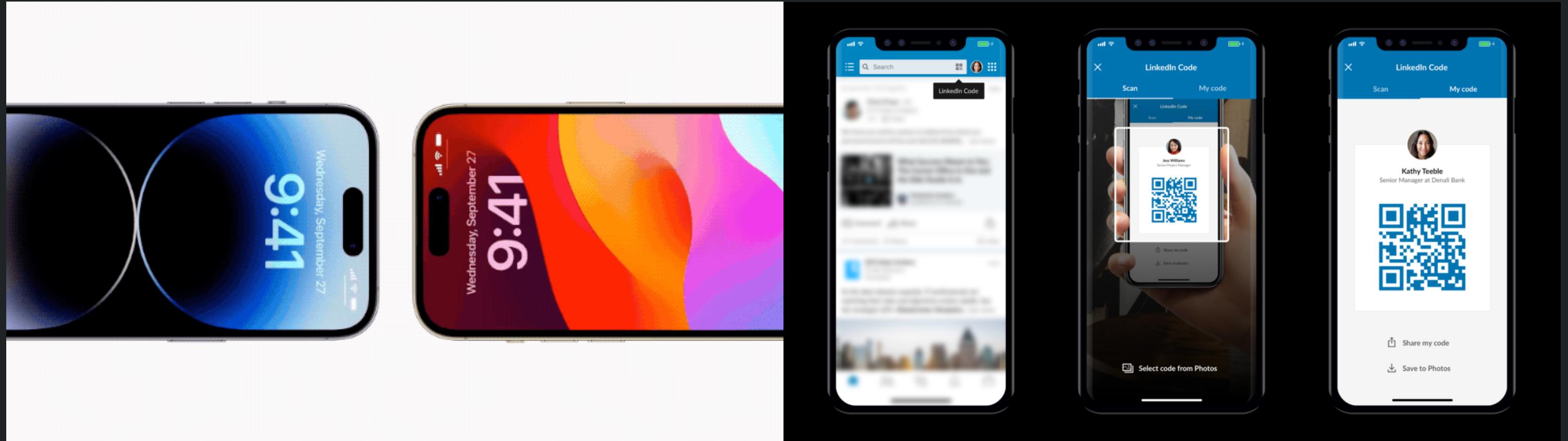
- Interaction is at the heart of digital systems.
- Poor design frustrates, great design delights.
- You'll learn to design interactions from the **ground up**.
- No design background needed — you'll build it here.

What Is Design?

- Not just aesthetics or decoration.
- Design is **decision-making**: how things work, feel, behave.
- A way to shape problems and imagine new solutions.

“Design is the rendering of intent.” – Jared Spool

Design Examples



Which one is more intuitive, efficient, joyful? Why?

What Is Interaction Design?

- Design of **interactive systems**: digital, physical, conversational.
- Focus on:
 - **Form**: layout, visuals, structure
 - **Behavior**: interaction flow, feedback
 - **Experience**: delight, accessibility, usability

Examples of Interactive Systems

- Voice assistants
- Fitness trackers
- Museum exhibits
- Chat interfaces
- Responsive animations

What You'll Learn

- **Design thinking** — Learn how designers frame problems and explore solutions
- **Visual and interaction design** — Understand layout, flow, feedback, and behavior
- **Sketching and iteration** — Generate ideas quickly and refine them over time
- **Critique and communication** — Give and receive feedback to improve your work

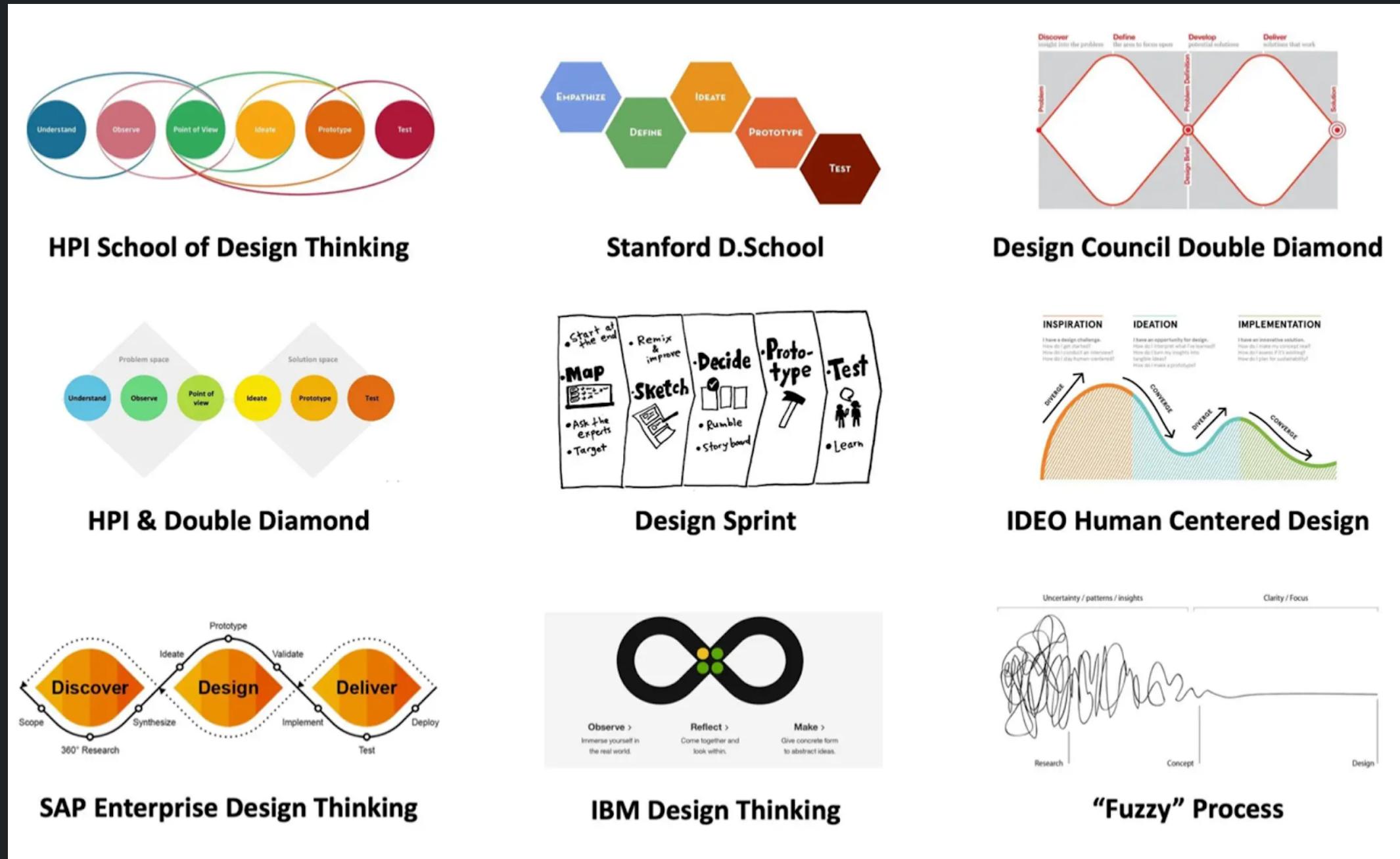
What You'll Learn (Cont'd)

- **AI tools in design** — Use AI to support ideation, layout, and exploration
- **Final project and portfolio** — Apply your skills to a polished, process-rich design

Design → Design thinking + Design process



No one design process!



What about AI?

We'll explore how AI can shape and be shaped by interaction design:

1. AI **as material** → designing systems with AI behaviors (recommendation, generation, conversation)
2. AI **as a tool** → using tools like ChatGPT, Midjourney, Galileo AI, Figma plugins

What happens when you think like a designer?

Meet **Clare**

Clare is a CS major. Her mom runs a neighborhood coffee shop.

She wants to help by creating an online ordering system.

What does she do?



Clare: Before Interaction Design Studio

- Builds a website with Apple Pay + Square
- Prints a QR code for quick ordering

Clare: After Interaction Design Studio

- Maps the full customer experience
- Sketches and explores creative interaction concepts
- Experiments with ambient, conversational, and AI-powered ideas
- Thinks through flow, transitions, and feedback
- Refines the design through critique and iteration

Interaction Design vs. Other Design Practices

Interaction design focuses on **what happens between people and systems over time**, especially **behavior, flow, and response**.

UI design

→ layout, visual composition

Interaction design

→ structure, feedback, timing, transitions

Studio Culture

- Studio = space to explore, test, and refine ideas
- Expect:
 - Lots of sketching
 - Iteration
 - Constructive critique
- Everyone contributes.
Everyone grows.





Course Structure

- Weekly rhythm:
 - **Monday:** Lecture
 - **Wednesday:** Hands-on design work
 - **Friday:** Critique, discussion, or assignment launch
- 4 themed blocks/assignments + final project
- Blend of **paper** and **digital** tools

Materials

- You'll be provided:
 - Sketching supplies
 - UI stencils
 - Dot stickers and other analog tools
- Later: **Figma** for digital prototyping
- AI tools for exploration and generation



Grading

- **Participation and studio work:** (✓ / ✓+ / -)
- **4 block-based assignments** — 3-day late bank
- **Attendance matters** — critique depends on your presence; 3-day absence bank
- **Rule of Thumb:** you'll get an A or AB if you do everything; A vs. AB depends on work quality
- **Workload:** Expect to spend ~6-8 hours/week outside of class on sketching, critique prep, assignments

Final Project

- Create a polished, portfolio-ready design
- Demonstrate process, not just outcome
- Integrate visual, interaction, and behavioral design
- Consider AI in design where appropriate

This Is a New Course!

- This is the **first time** Interaction Design Studio is being offered.
- Some parts will evolve as we go — and that's part of the design process!
- We'll ask for your feedback as we shape this experience together.
- Expect a few bumpy moments — and opportunities to help us improve it.

Closing Thoughts

- You don't have to be an artist to be a designer.
- Design is a **practice** — we'll build that practice together.
- Be bold. Be curious. Think with your hands.

What's Next?

- **Friday:** In-class sketching warm-up
- **Week 2:** Visual design elements and principles
- You'll start building your design vocabulary — and sketching a lot!

Friday: Warm-Up Activity

- In-class design warm-up challenge
- You'll get sketching, ideating, and presenting
- Come ready to **draw, think, and share**

Media Sources

[Medium](#) | [LinkedIn](#) | [SD4G Lab](#) | [NN Group](#) | [CMU](#) | [Freepik](#)
| [UI Stencils](#)