

IN4MATX 285:

Interactive Technology Studio

What is this Course?

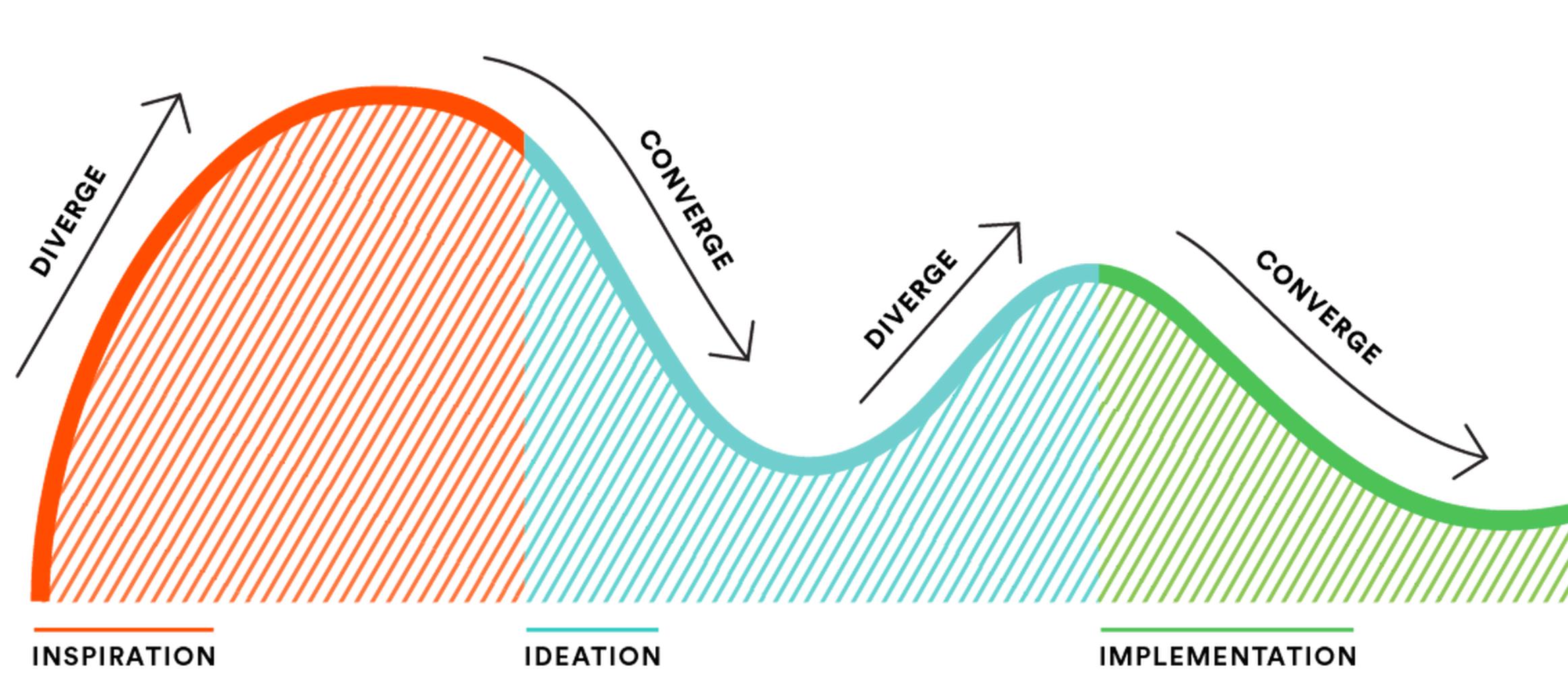
Today's goals

By the end of today, you should be able to...

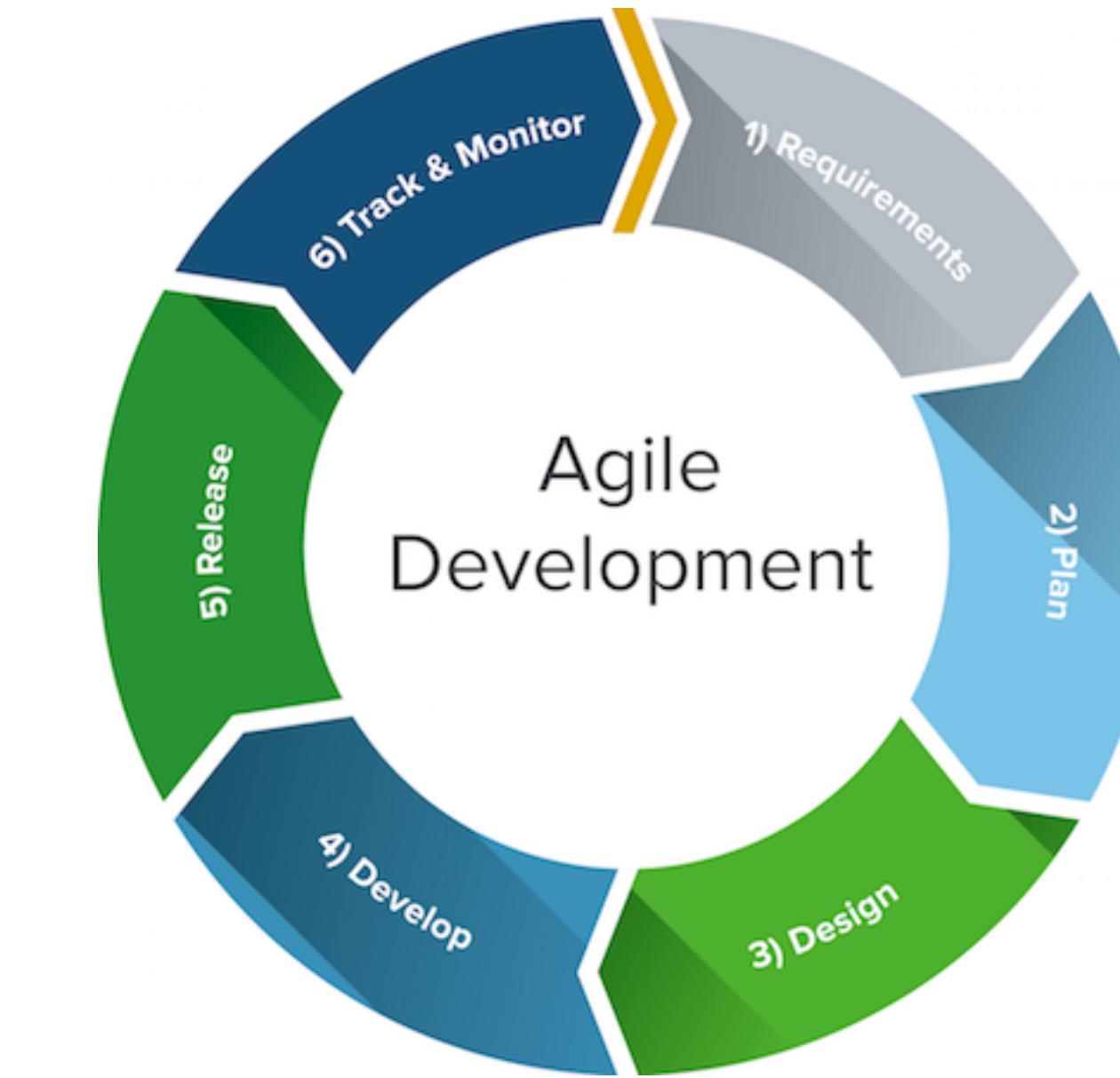
- Summarize this course's goals
- Articulate why we often use web technologies for implementing interfaces
- Identify your course staff
- Find course policies and describe upcoming course tasks

So, what are we doing here?

Product design process

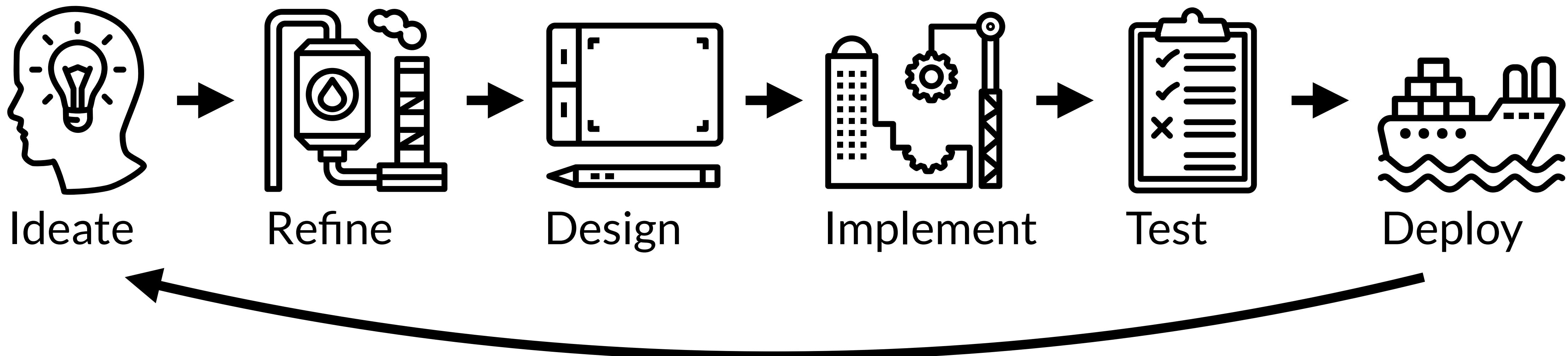


Human-Centered Design, IDEO



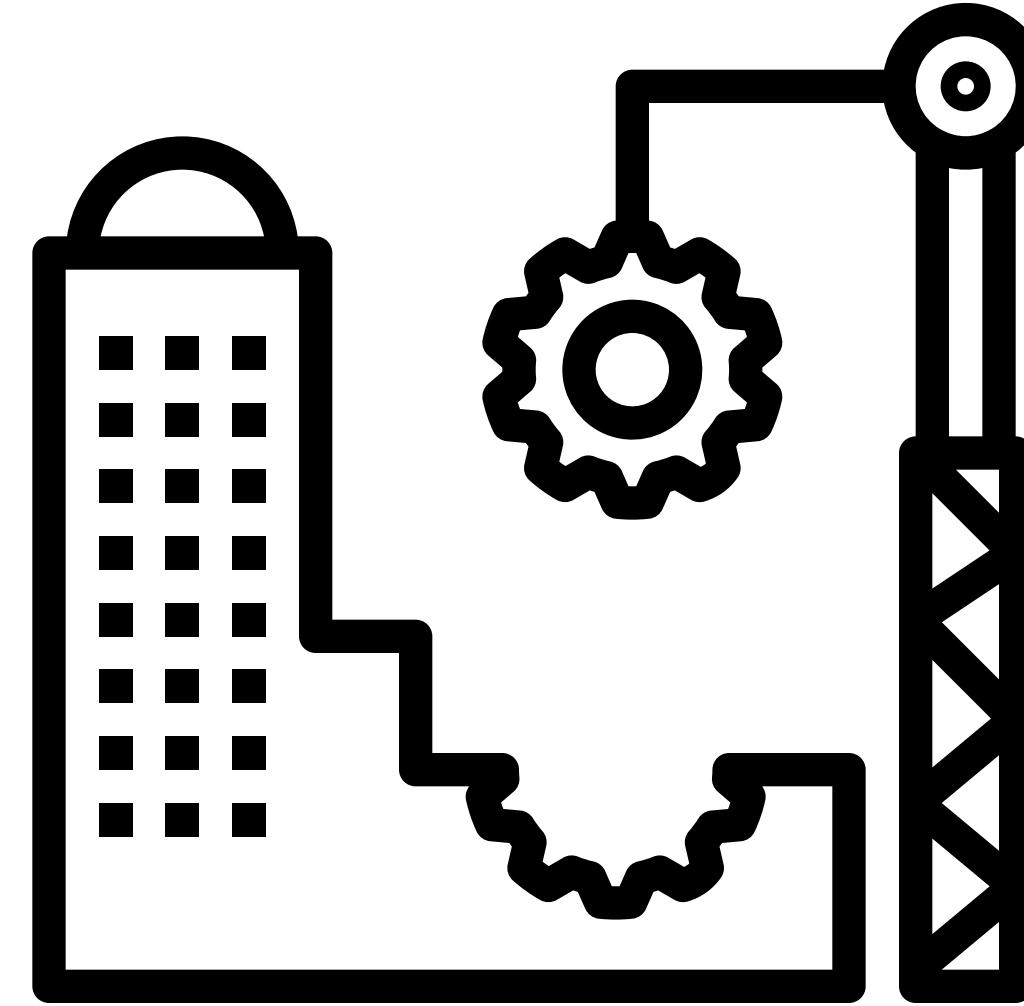
Agile Development, Agile Manifesto

Product design process, simplified



User interface implementation

- Has the power to turn ideas into reality
- Often dictates design decisions and timelines, for better or for worse
- As a designer or researcher, you will need to communicate with your colleagues who are doing the implementation



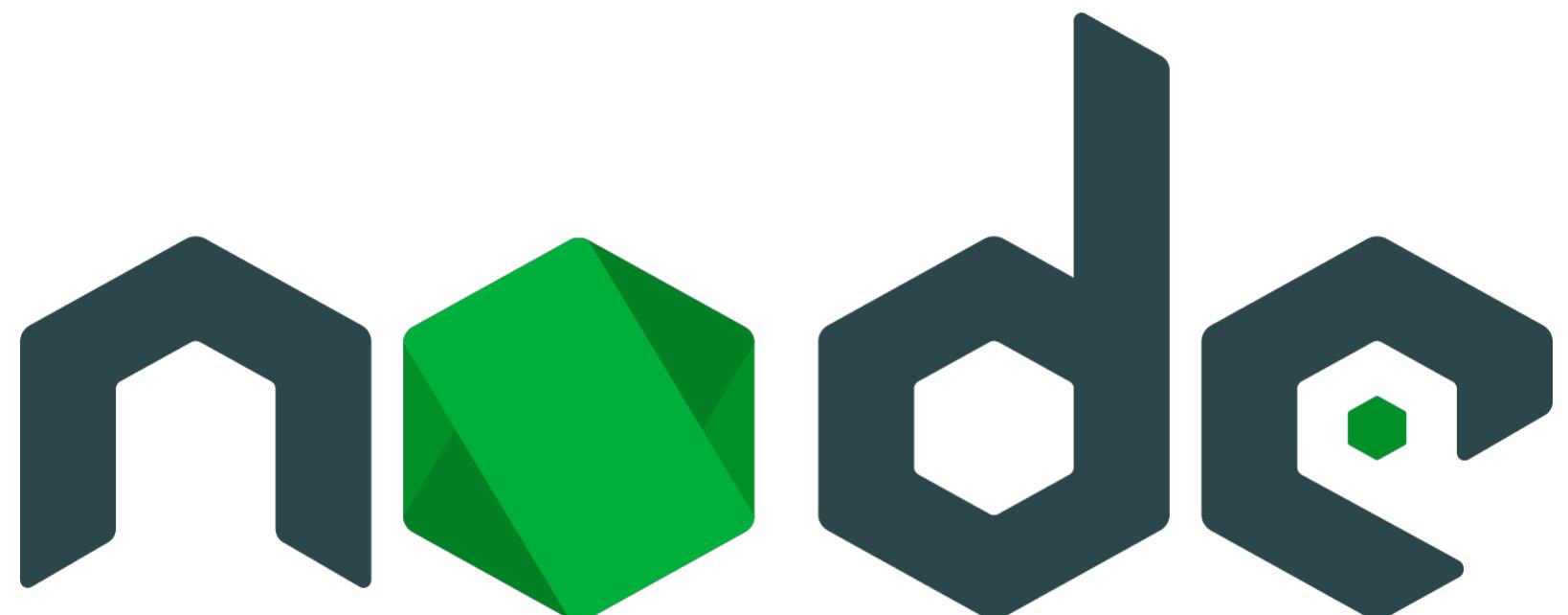
Ok, so how do we implement user interfaces?

Implementing user interfaces

- Mockups, interactive wireframes, etc. can get you pretty far towards explaining your idea
- But ultimately, you need to write code
- Tools can help, or reduce the need for coding
 - More on this later

What is interface implementation today?

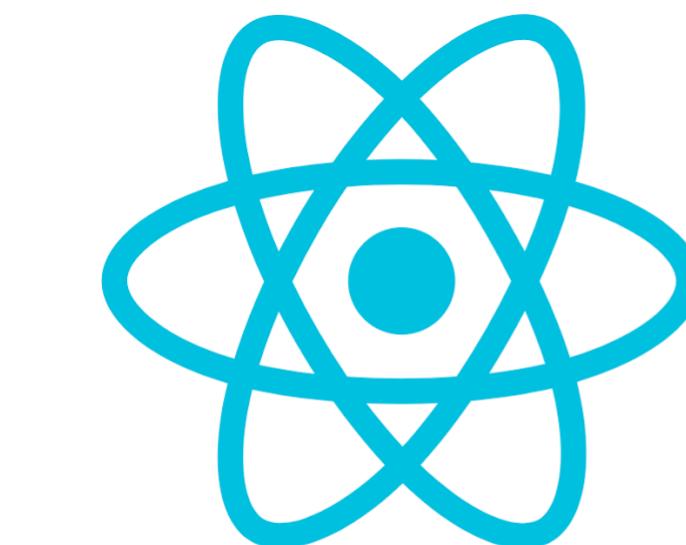
Web technology, primarily



Bootstrap



Vue.js



React JS



ember

Web tools as the standard

- Nearly every platform needs to communicate with a cloud system
- Most platforms need a web browser so people can access sites
- Shared programming language and development environment enables efficient work
- Developers can write once, deploy to many platforms
 - Hopefully customize style and functionality to the device
- Other reasons?

Web is the standard, but not the only

- There are lots of reasons not to implement using web tools
- Further away from the hardware, less performant
- Harder to access device resources
- Further away from platform guidelines
 - Apple Human Interface Guidelines, Material Design
- But if you're only looking for exposure, it's the place to start

Human Interface Guidelines

The HIG contains guidance and best practices that can help you design a great experience for any Apple platform.

New and updated



Camera Control



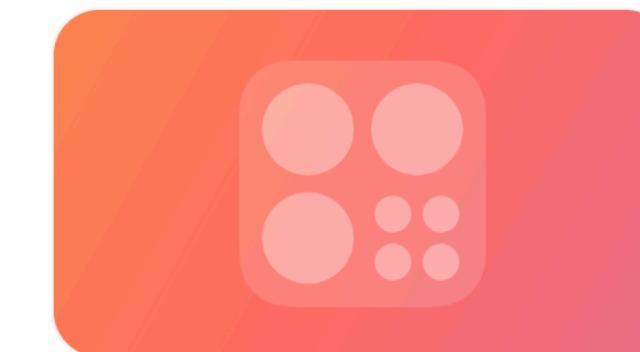
Gestures



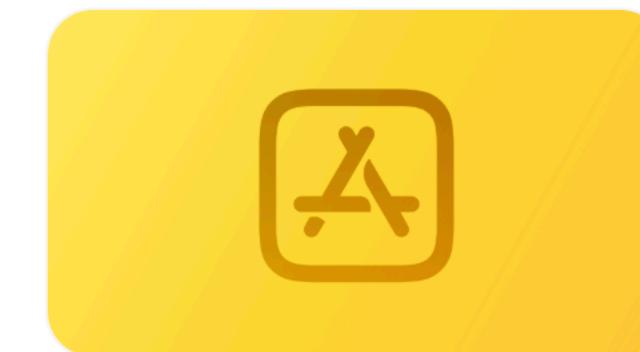
Designing for games



Immersive experiences



Controls



App icons

This class won't teach you to be a developer.

We have a different Masters program for that: Software Engineering!

**Instead, we will learn how to work with
developers.**

**We will learn to appreciate what they
do, and converse on their topics.**

Learning objectives

By the end of this course, you should be able to:

- Implement basic interactive website in HTML, CSS, and JavaScript
- Be conversant with developers on more complex technical concepts
 - Frontend vs. Backend development
 - Storage and authentication
- Follow principles for working effectively with developers
 - Version control
 - Code libraries

Switching gears: Course overview

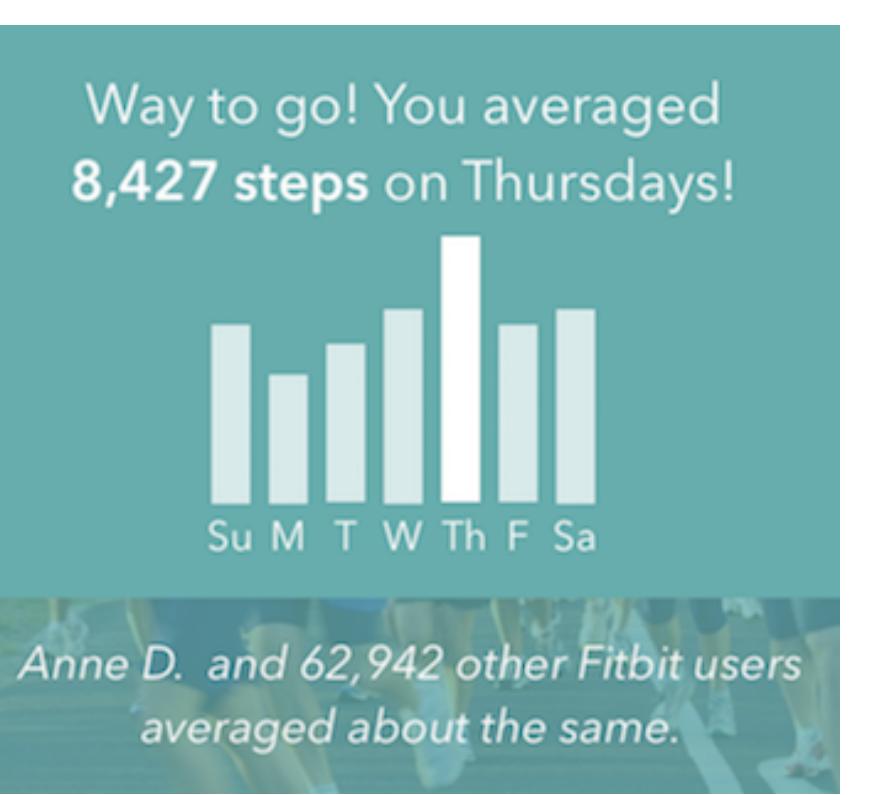
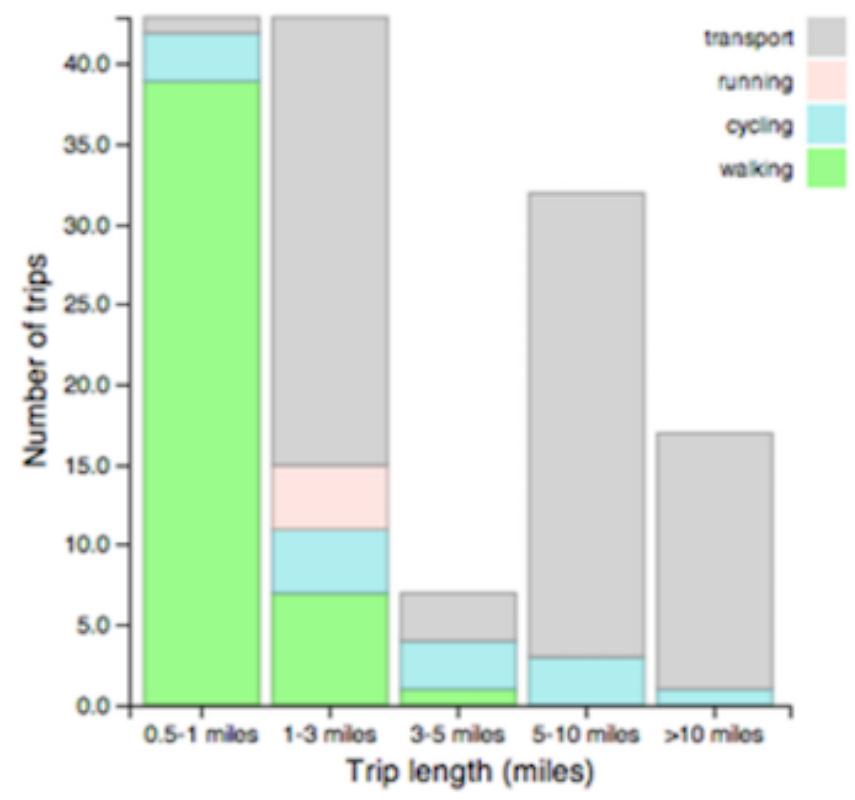
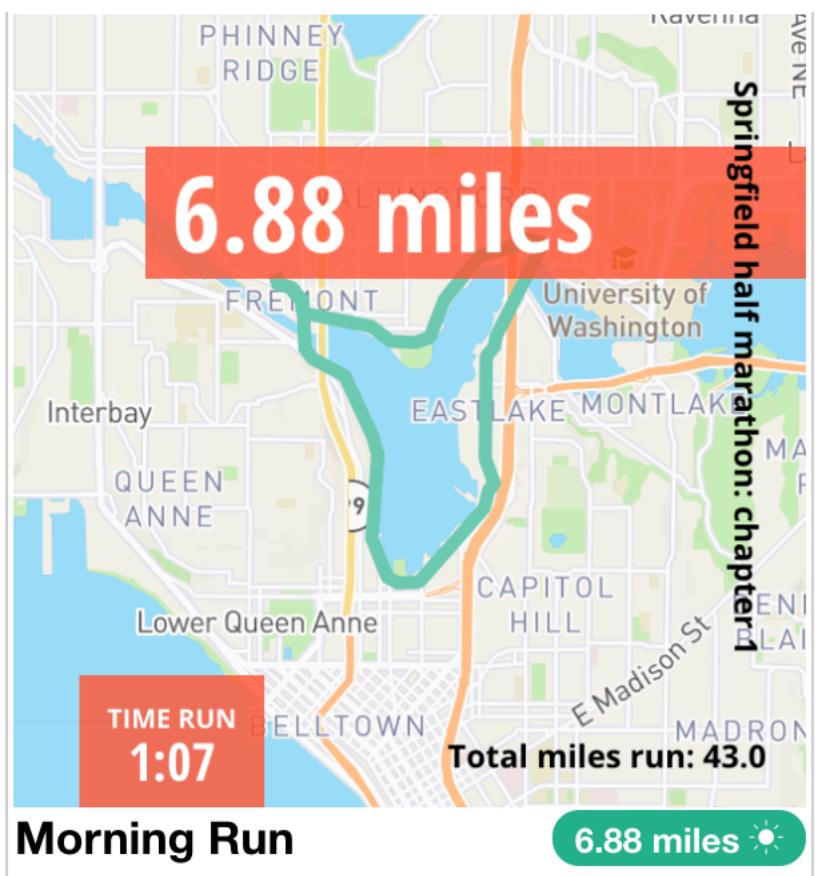
Who we are

Daniel Epstein (he/him)

- Ph.D. Computer Science & Engineering, University of Washington, B.S. Computer Science, University of Virginia
- Joined UCI Informatics in 2018
- Internships at Microsoft & Adobe, collaborations with Snap(chat) and NAVER



Who we are



Who we are

Weijun Li (she/her)

- 1st year PhD in Informatics
- M.S. Design, Zhejiang University,
B.S. Information Resource
Management, Northeast Normal
University (China)
- Research interests: Human-
Computer Interaction, Personal
Informatics
- Avid cycler



Who we are

Ziqi Yang (she/her)

- 1st year PhD in Informatics
- M.S. in Information Science, UMich,
B.S. ECE, Shanghai Jiao Tong
University (China)
- Interested in HCI, Women's Health,
Health Informatics
- Enjoys travel, photography, and
recently climbing



Course website

- <https://inf285-sp25.depstein.net/>
- Basically everything is there
 - Canvas is just for submission and discussion
- Why?
 - This is a course on implementing interfaces, so we thought it was important to implement the interface for this course
 - <https://github.com/uci-inf-285/inf285-sp25>

The syllabus

- Explains due dates/times, assignment policies, etc.
- It probably answers your question about how this course runs
 - Please check it before you ask us

Syllabus

Policies and background for IN4MATX 285, Spring 2025 Quarter. All syllabus content is subject to change, particularly prior to the start of the quarter.

Course Description

From the [catalog](#):

Technologies, languages, and skills required for creating prototypes to communicate interactive technology concepts. Topics include HTTP, CSS, CSS scripting, AJAX, Design Patterns, Javascript, Javascript libraries such as jQuery, SQL, MVC, and cloud architectures.

In practice, every instructor takes a slightly different bend to these topics. I focus on covering modern technologies for web development, which includes some of the topics described above but not all.

This course is restricted to MHCID students. All students must have taken IN4MATX 285 with a B- or higher.

Learning Objectives

By the end of this course, you should be able to:

- Implement basic interactive websites in HTML, CSS, and JavaScript.
- Be conversant with developers on more complex technical concepts such as frontend versus backend development, storage, and authentication.
- Follow principles for working effectively with developers such as using version control and code libraries.

Calendar

Calendar

Mar 30	Mar 31 Overview: What is This Course? Programming: HTML Live Demo: HTML 4:00-5:00 Zoom	Apr 1	Apr 2 Practice: Version Control Daniel Office Hours 4:00-5:00 Zoom	Apr 3	Apr 4 A1 Due Design Mockup	Apr 5
Apr 6	Apr 7 Programming: CSS & Design Systems Live Demo: CSS & Design Systems 4:00-5:00 Zoom	Apr 8	Apr 9 Practice: Frontend vs. Backend Development Daniel Office Hours 4:00-5:00 Zoom	Apr 10	Apr 11 A1 Due Code Check-in	Apr 12
Apr 13	Apr 14 Programming: Variables, Loops, & Conditionals in JS Live Demo: Variables, Loops, Conditionals 4:00-5:00 Zoom	Apr 15	Apr 16 Practice: Responsive and Adaptive Design Daniel Office Hours 4:00-5:00 Zoom	Apr 17	Apr 18 A1 Due Final submission	Apr 19

<https://inf285-sp25.depstein.net/calendar>

Course Format

- I will pre-record lectures twice a week
 - Aiming for short-ish (~20 mins per lecture)
- I will be available synchronously twice a week
 - Live demo once a week (will record)
 - Office hours once a week (will not record)
- The TAs will also have weekly synchronous office hours

Course format

- Two types of lectures: *programming* and *practice*
 - One of each in a given week
- Programming lectures
 - Will cover a concept that is core to coding
 - Aim to be useful for the class assignments
- Practice lectures
 - Will cover a non-coding concept that is core to developing software
 - Aim to be useful for your professional practice

Staying in touch

- Slack: <https://uci-inf-285-sp25.slack.com/>
 - Information will go out to Slack first!
- Email us: informatics-285-staff@uci.edu
- For the most part, Canvas will only be used for submission and grades

Communication best practices

- Slack is best for assignment clarification and assistance
 - Please use the public channels to allow your peers to help
 - We will probably redirect messages so your peers can benefit from your questions
 - But we will be monitoring and answering questions
- Email is best for personal communication (course concerns)
 - Email the staff list (informatics-285-staff@uci.edu) rather than us individually

Grading

- Assignments: 80%
 - 25% for A1 and A2, 30% for A3
- Participation: 20% (up to 5% extra credit)
 - 20% responses to Practice lectures
 - 5% Slack or Synchronous participation

Participation

- Post responses to the practice lectures on Canvas
- Answer each other's questions on Slack!
 - You can also get participation credit this way
 - You can respond faster than we can
 - Often times, you've experienced the same pitfalls

A1

- Is already posted
- You'll design, then implement a Widget Factory in Adobe Spectrum
- Weekly deliverables for the first three weeks

The screenshot shows the Adobe Spectrum Design System interface. At the top left is the ADOBE logo. In the center, the text "Spectrum Design System" is displayed in red. Below this are several red icons representing different design functions. To the right, there's a "Delete 3 documents" dialog box with a "Delete" button. Further down, there's a "Prototypes" section with a "Create share links for feedback" button. On the far right, there are sections for "Job title" (Product Designer, Designer, developer, lawyer, etc.), "224 selected" (with edit and delete buttons), "Get Started" and "Continue" buttons, a color gradient bar labeled "Teal", and "Home" and "Apps" buttons. At the bottom, there's a "Purchase completed" message with a checkmark, a "Storage space" bar at 80%, and a "Place Order" button.

Toy Boat

\$15.99

4.6

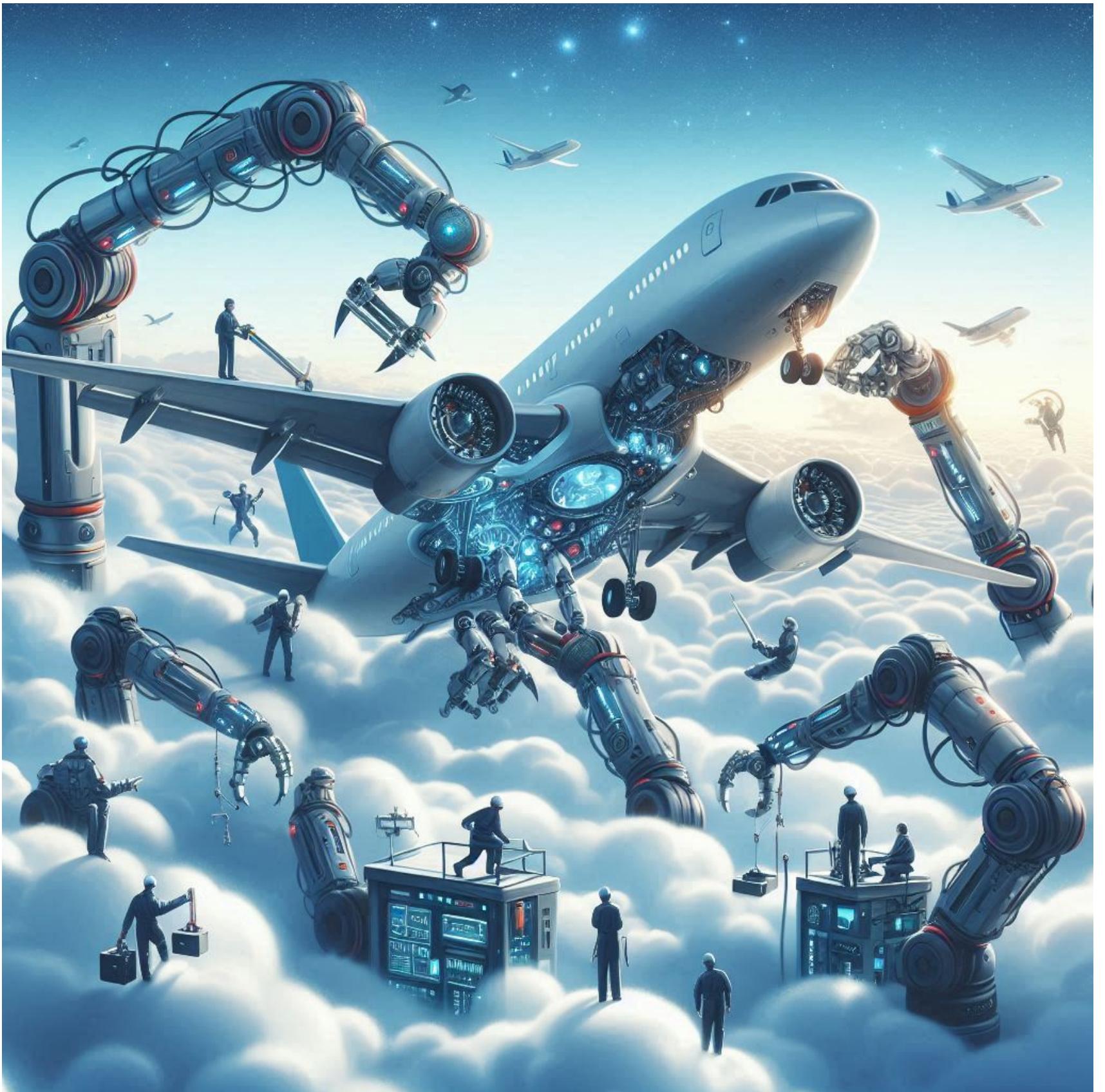
How many? What color?

Flexibility

- We don't know when your life is being disrupted
- Within reason, we will allow late assignment submissions without penalty if you email us at least 24 hours before the assignment deadline
 - Typically we'll grant a few days for extension, up to a week
 - No late submissions for the last assignment
 - Treat extensions as a last resort, but it is an option

Bear with me this year...

- I'm building the plane while flying it
 - I have ~half of the lectures and assignments made
 - I have taught these concepts for years, but to a different audience
 - ICS undergrads who have taken a few programming courses already
 - Many of whom will go off to become interface developers



Bear with me this year...

- I am trying to make this course as useful to MHCID students as possible
 - New assignments centered around implementing Design Systems and interface accessibility
- But it's likely I will need to adjust course expectations in real-time
 - And I welcome feedback!



Reflection

- We know you have a lot going on.
 - Capstone is just kicking off
 - You're tired from your previous quarters
 - You have whatever else going on in your life
- But we ask you to be invested this quarter.
 - We promise to do our best to make it worth your effort!

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