

CS 147 Project Expo

Design Thinking for User Experience Design, Prototyping & Evaluation

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Computer Science Department
Stanford University

Autumn 2025

December 5, 2025

Outline

Course overview	6:00-6:30
Team pitches	6:30-7:00
Posters/demos/judging	7:00-8:45
Awards	8:45-9:00



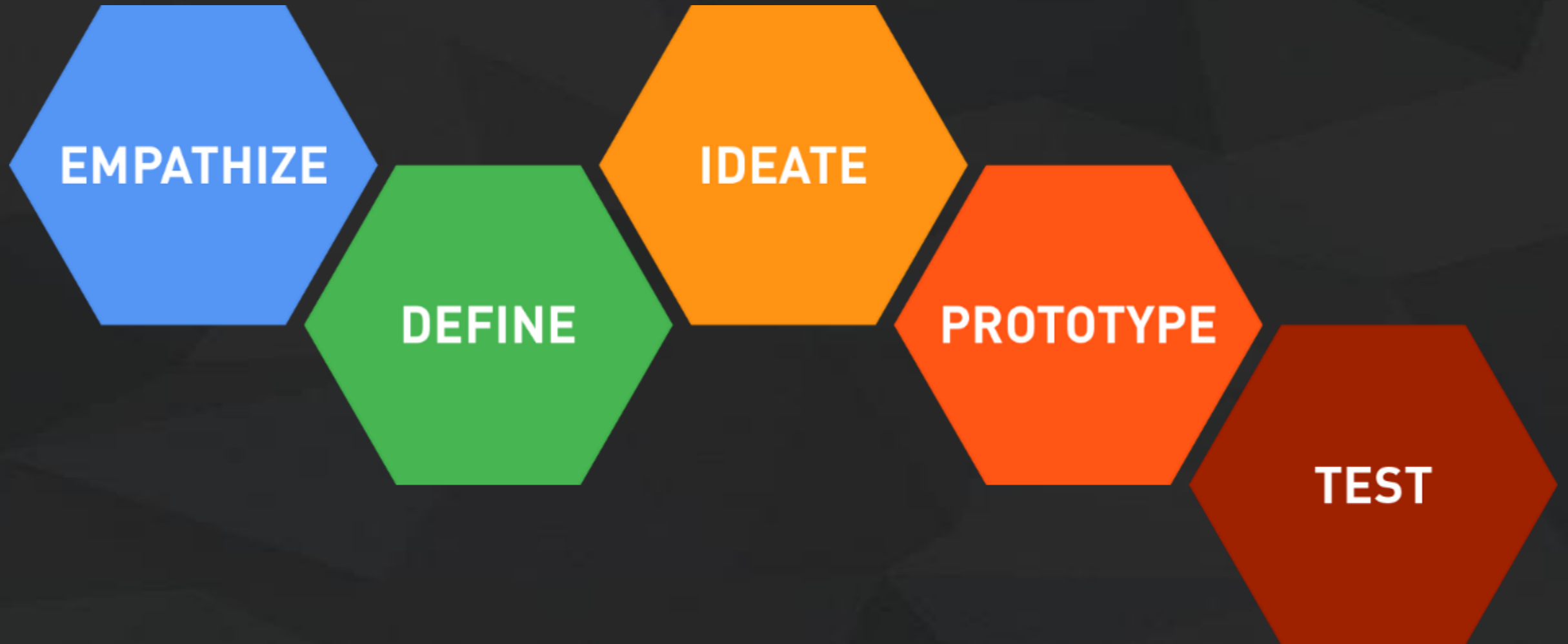
Balance

DESIGN

TECHNOLOGY



Design Thinking Process



Goal of CS 147

Learn to design, prototype, & evaluate UIs

- Tasks, activities & practices of prospective users
- Cognitive/perceptual constraints affecting design
- Techniques for brainstorming, ideation & prototyping
- Methods for evaluating UI designs
- Importance of iterative design for usability
- Technology used to prototype UIs

- *How to work together as a team*
- *Communicating results to a group*

Project Based Course

- Iterative design of a real UI
- Theme: mobile
- Quarter long projects
- Students
 - ~85 across CS, Symbolic Systems ...
- 23 Teams
 - 3-4 members
- 10 major group assignments
 - group work is ~60% of course grade
- Four presentations
 - every team member presents

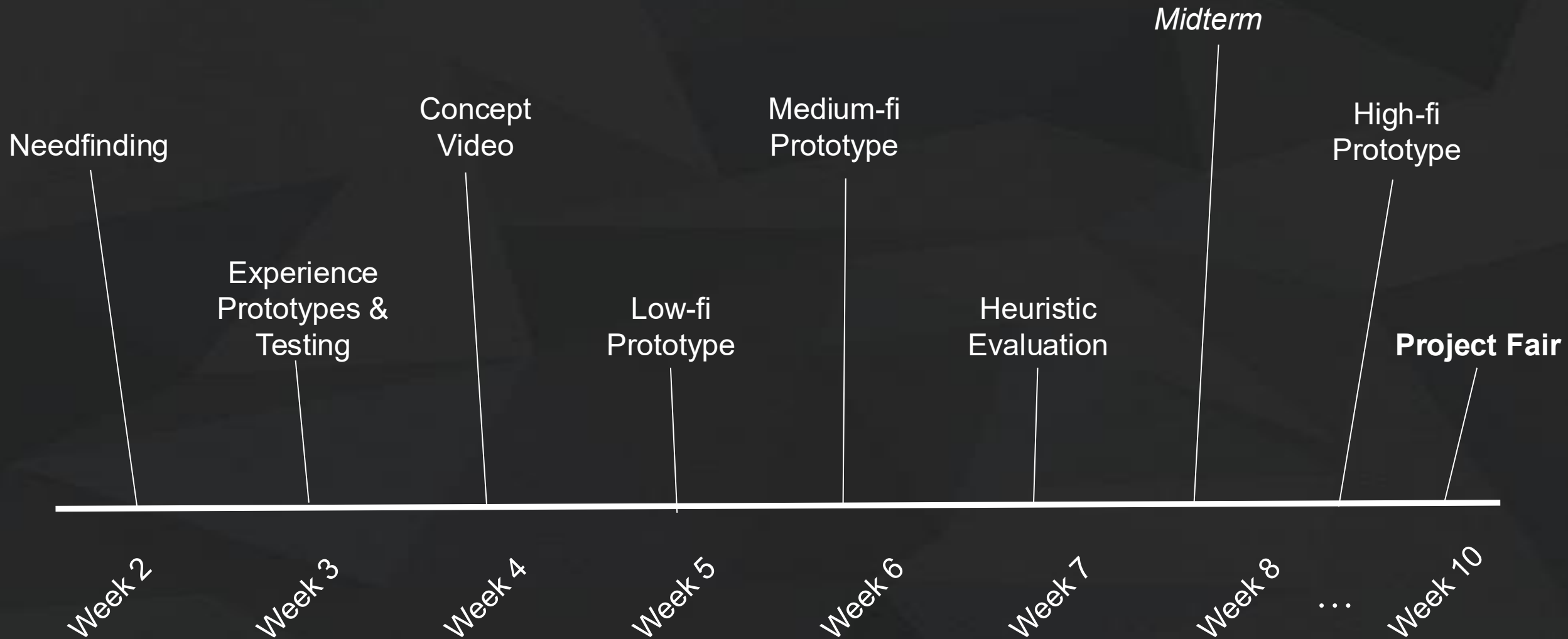


Design Studios

Teams attend small weekly studio (8-16 students)
-critique/feedback in more intimate environment




Project Process Timeline



User-centered Design: Needfinding

- Observe existing practices for inspiration
- Make sure key questions answered
- Ethical questions in design w/ underserved communities

Where were our interviews conducted?



01 **Antonio's home in Mnt. View**
We interviewed Antonio a frequent home cook and data engineer at his home in Mnt. View

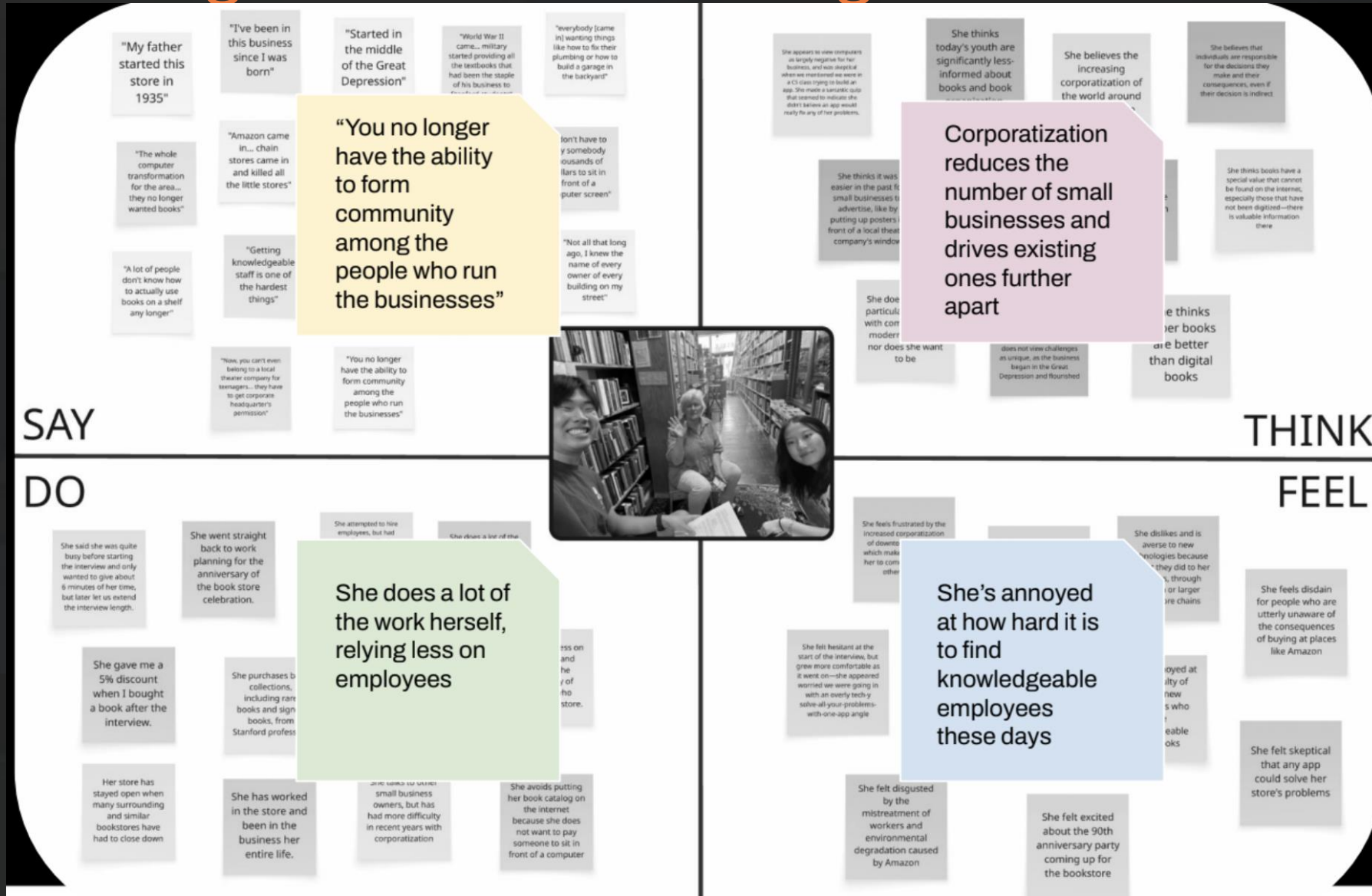
02 **Center for Academic Medicine**
We interviewed Jessica an amateur cook, and Biomedical Engineer outside the Center for Academic Medicine

03 **Athlete Dining**
We interviewed Chef Jason the head chef of Stanford Athletic dining inside of Athlete dining.

04 **Coffee shop in San Francisco**
We interviewed Claire a MPH Grad Student, and track athlete for Tennessee at a coffee shop in San Francisco

Simmr

Unpacking the Needfinding



Develop Point of Views (Person + Insight + Challenge) Brainstorm on How Might We Solve

WE WERE AMAZED TO REALIZE . . .
(what did you learn that's new?)

THAT THANKS TO THE BOAT OWNER'S MENTORSHIP, TRUST, AND DESIRE OF
THE FISHING LIFESTYLE AND CONNECTION TO NATURE, HE HAD TURNED HIS LIFE
AROUND FROM DRUG ADDICT W/OUT A JOB TO SPENDING WITH SKILL & COMPANY

IT WOULD BE GAME-CHANGING TO . . .
(frame up an inspired challenge for yourself
don't dictate the solution)

ALL OF US COULD TAKE A RISK TO SEE A SPARK IN OTHERS AND
NURTURE IT INTO A PURPOSEFUL TRANSFORMATION.

HMW bring
routine (and
discipline)
less?

Experience Prototype to Test Assumptions

Prototype 2: Digital Pranks

Test Setup (n=3)



Participant is asked to read a book



Their reading flow is interrupted by a page of goblin stickers, mimicking the surprise of an unexpected prank

Wayn

Concept Videos: Planning Storyboards

child in darkness, under blanket, working

anxiety as work piles up

too many tasks, getting overwhelmed

OPT. 01

LIGHT (spotlight?)

OPT. 02

LIGHT ENTERS

let's work together!

some stress getting lighter

smiling relaxing

darkness starts fading

working together

reminds to take breaks take eat hydrate & hydrate

big task

GOAL: SAVE THE WORLD

work on that - find things - change things - change

break into tasks

① work alongside someone else with breaks

② find small tasks for large goals

HOW ARE YOU DOING... HOW IS YOUR WORK PROGRESSING... TAKE TIME TO REFLECT...

THAO

tagline

no darkness

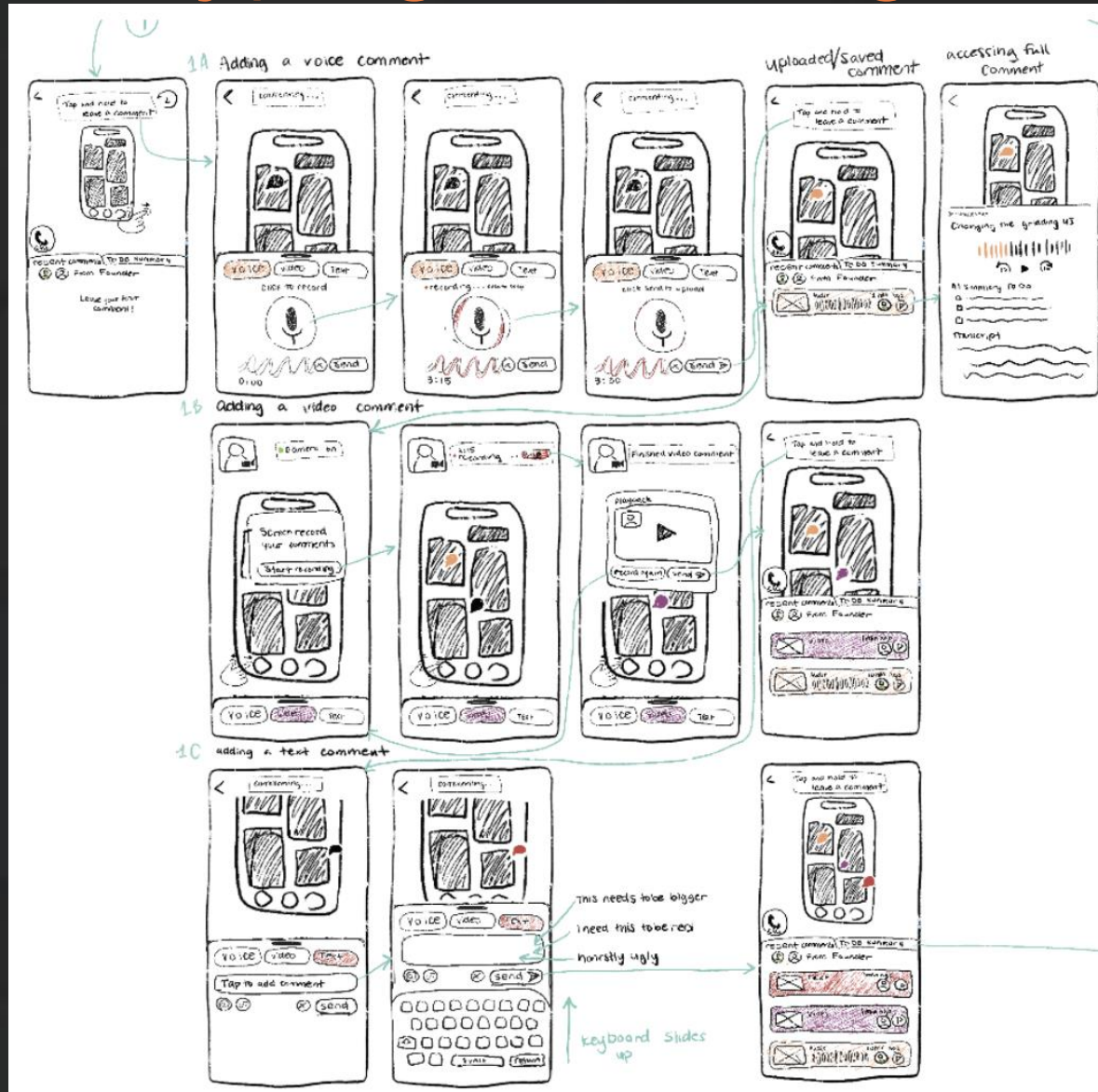
logo

③ helps self-reflect on progress & quality of work

Concept Videos

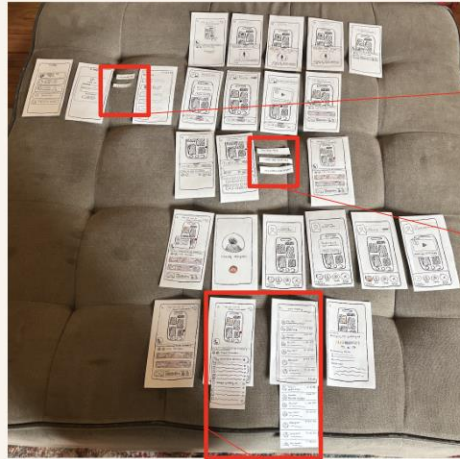
Chatatouille

Low-fi Prototyping & Testing

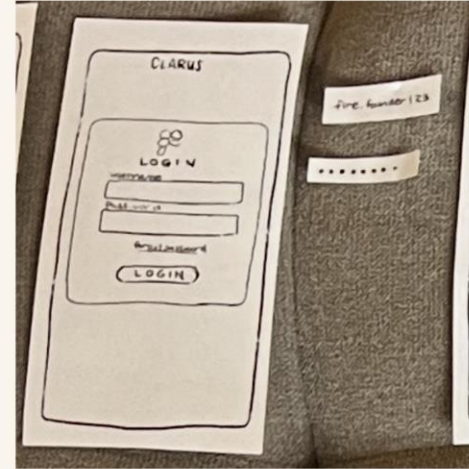


Low-fi Prototyping & Testing

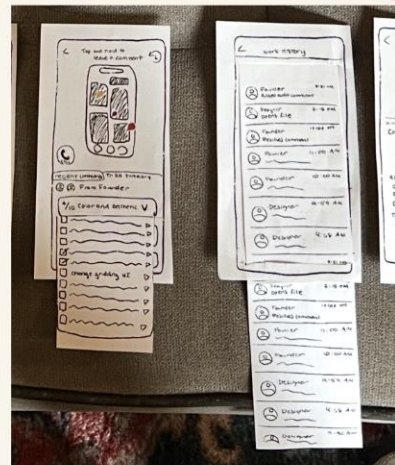
Construction: Interactions



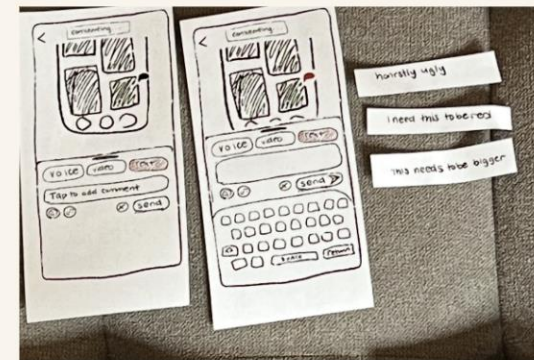
login flow:
username and
password fields



text inputs: typing
comments



scrolling: sliding paper



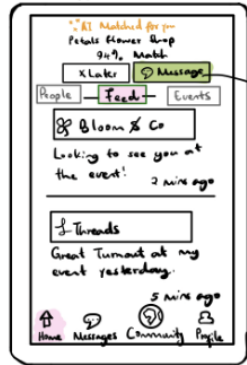
Clarus

Low-fi Prototyping & Testing

Simple tasks:

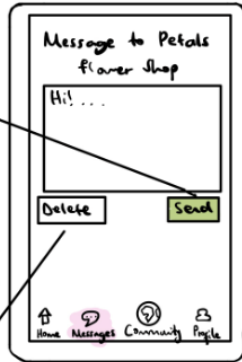
Message another small business for a collaboration.

1. Open app and land on the home-page.



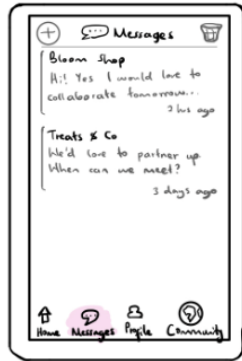
2. Open the feed by clicking on 'feed'.

3. click on 'message' button to send a message to the business AI has matched for you.

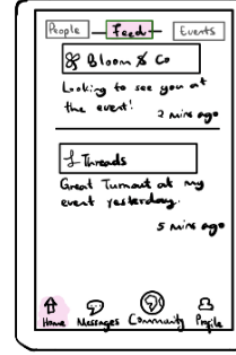
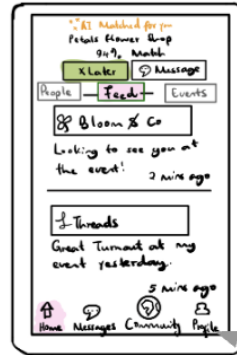


4. Click **send** to send your message to your matched business and you are all done! Taken back to home-page-feed.

5. Click **delete** & you are returned to your messages conversation history.

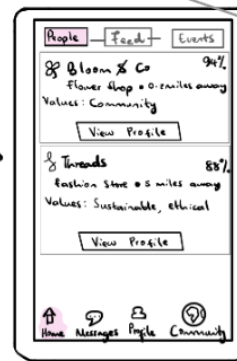
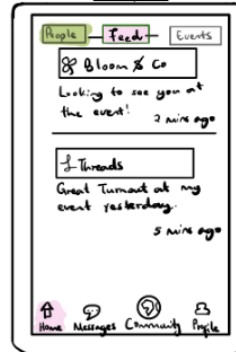


Open the app and click **later**



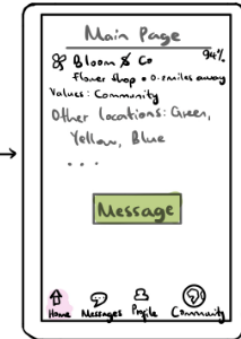
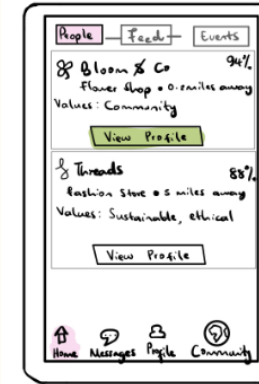
2. The AI matched suggestion disappears.

3. Click on **people** to discover small businesses.



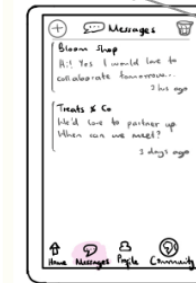
4. Scroll down till you discover a business you want to collaborate with.

5. Click on **view Profile** to see more details about that small business.



6. Tap on message if you want to connect with that business & collaborate on an event.

5. Click **delete** & you are returned to your messages conversation history.



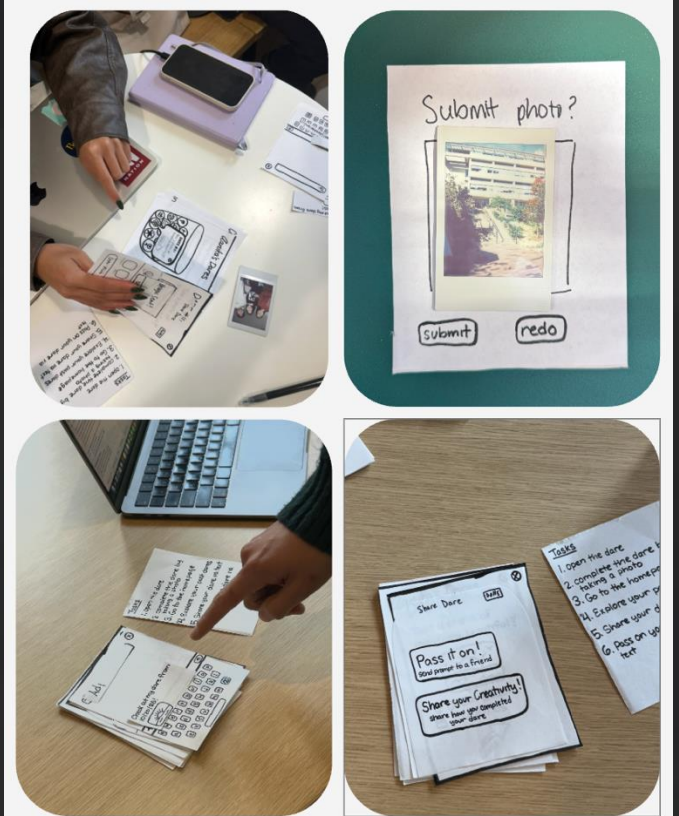
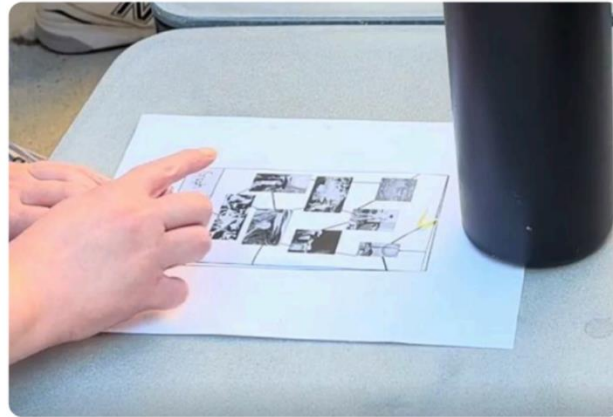
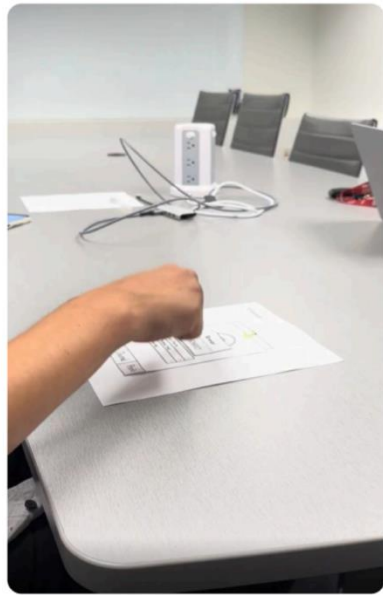
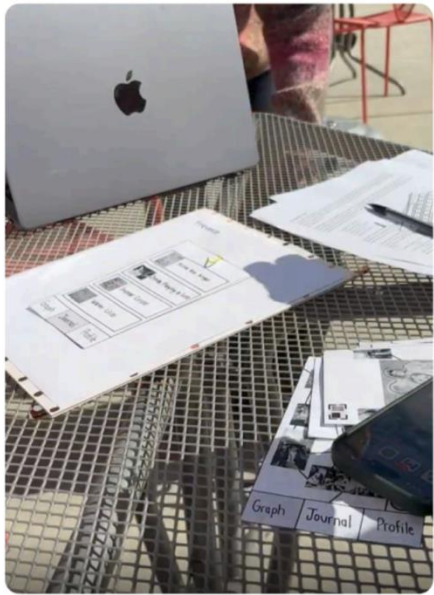
← if you click delete



4. Click **send** to send your message to your matched business and you are all done! Taken back to home-page-feed.

Low-fi Prototyping & Testing

Low-Fi Prototype Testing



Traverse

DareDrop

Interactive Prototypes

Medium Fidelity

Complex Task

update your learning goals
mentee perspective



Select a skill to update your goals

Select a goal to update/edit

Click done to save your edited/updated goal

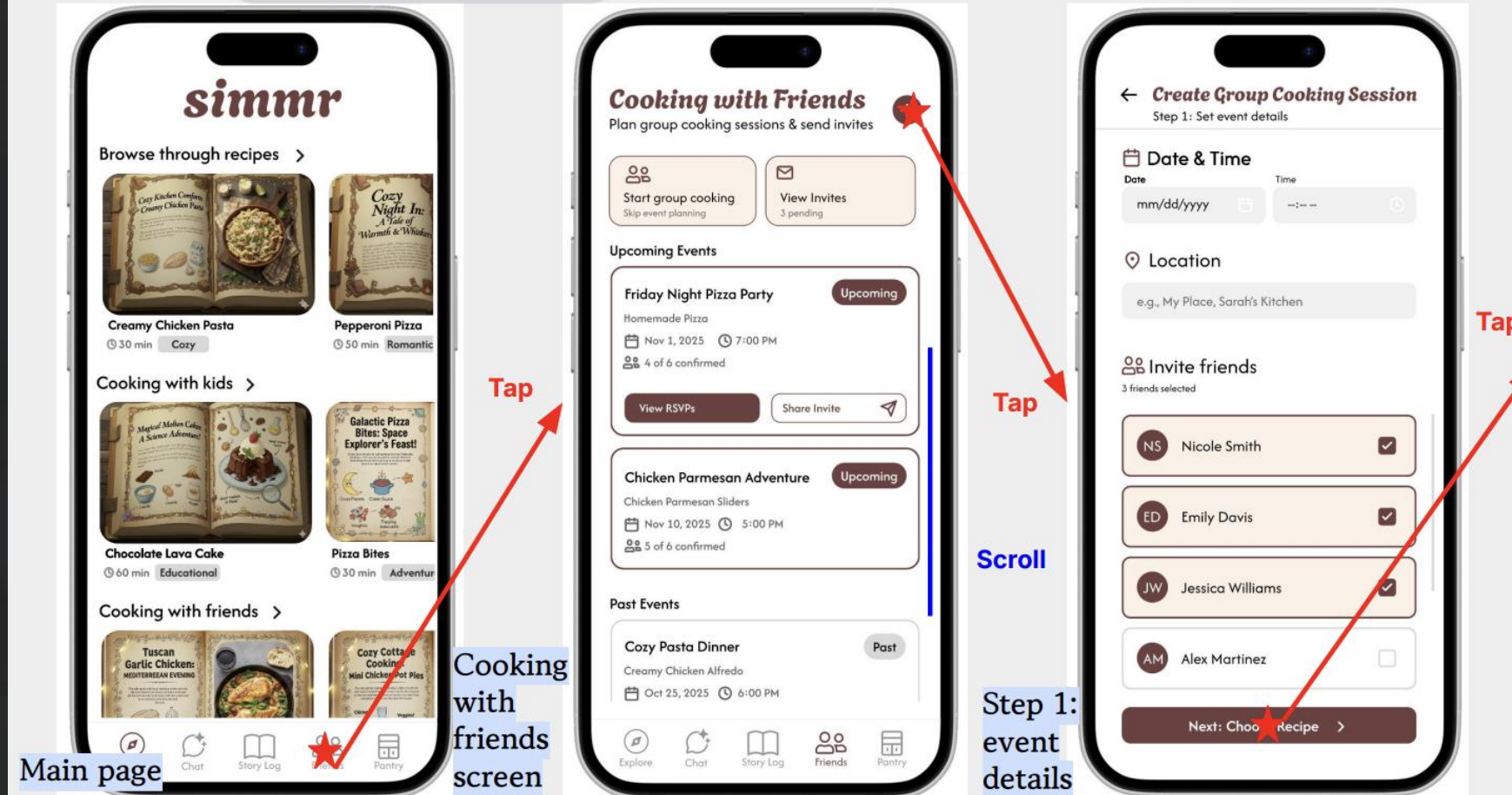
Nomi

Interactive Prototypes

Medium Fidelity

MODERATE Task

Create a dinner party with your friends.

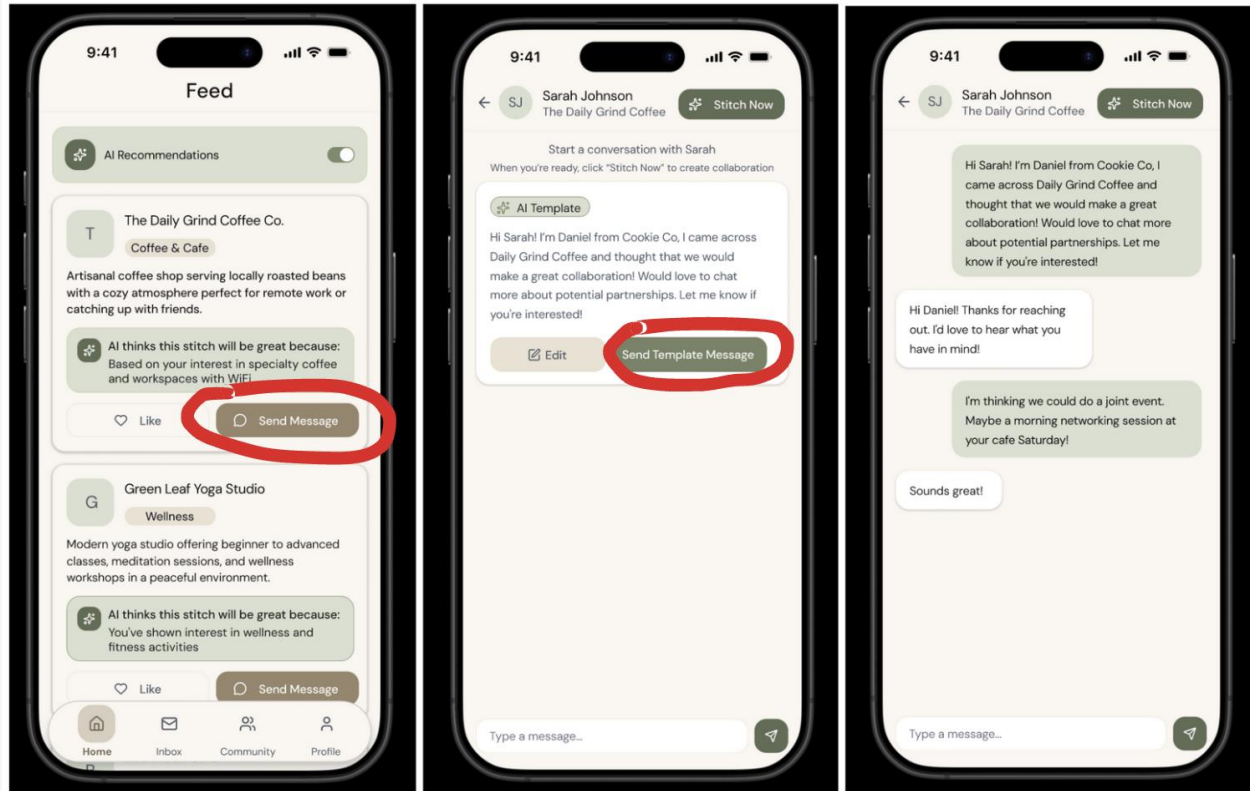


simmr

Interactive Prototypes

Medium Fidelity

Simple Task: send a message to collaborate



Click the send message button to one of the businesses you want to collaborate with.

You can choose to send your own message or send the AI-powered message.

Send message and continue conversation!

Stitch

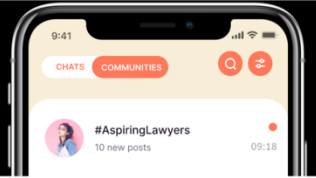
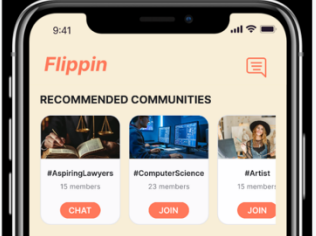
Evaluation

- Test with real customers (participants)
 - w/ interactive prototype
 - low-fi with paper “computer”
- Low-cost techniques
 - expert evaluation (Heuristic Evaluation)
 - online testing



Wanderlust

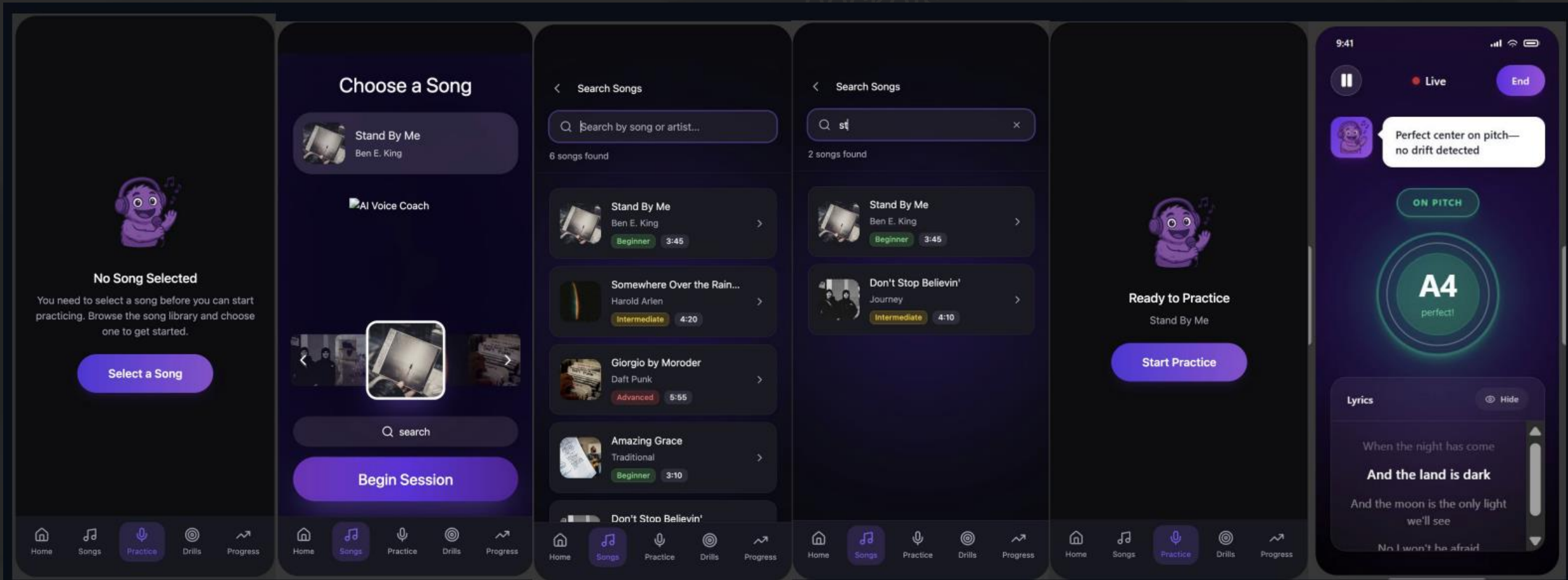
Evaluation

	A	B	C	D	E	F	G	
1	Prototype Description:	Flippin is a networking mobile app for individuals looking to switch careers; to combat the problem of lack of support, knowledge, and/or experience in the fields that could be interesting for potential switchers, this tool attempts to address these challenges by providing a community-driven forum that is prepared to provide specific field-related assistance and advice.						
2								
3	Simple Task	Read stories or reflections from others going through similar stages of career transitions.						
4	Moderate Task	Document my progress and get feedback from others making transitions.						
5	Complex Task	Discover opportunities to shadow someone in a different career in my area.						
6								
7								
8	Individual Heuristic Evalu...					*attach images in this column if helpful		
9	Problem #	Heuristic	Task	Severity	Description	Images	Rationale	
10	1	H1: Visibility of System Status	1. Simple Task	3	After joining '#AspiringLawyers' and am transported to 'Communities' tab, there is a tab with the name of the community, but the profile picture of some woman instead of the cover image of "#AspiringLawyers"		This makes the user feel like this page is for private messages rather than communities; the feedback isn't matching the action that was just taken	
11	2	H1: Visibility of System Status	1. Simple Task	3	After joining "#AspiringLawyers" and come back home, the same community is still visible under 'Recommended Communities' subcategory		Seeing the same community still in 'Recommended' gives an unintentional indication that the community was perhaps not properly joined. 'Recommended' areas are usually reserved for entities the user has not interacted with yet and is being encouraged to, not to reinforce entities they have already expressed interest in	
12	3	H3: User Control & Freedom	1. Simple Task	4	No identifiable way to retract a decision to 'Join' a community, or backtrack from accidentally selecting the option to 'Join' a community.		Without a way to retract their action and "unjoin" the community, the user may end up as a member of a number of groups that they eventually find they cannot leave but may no longer be interested in as they	

Ananya's heuristic evaluation of Flippin

Interactive Prototypes

Hi-Fidelity



AI-Capella

Interactive Prototypes

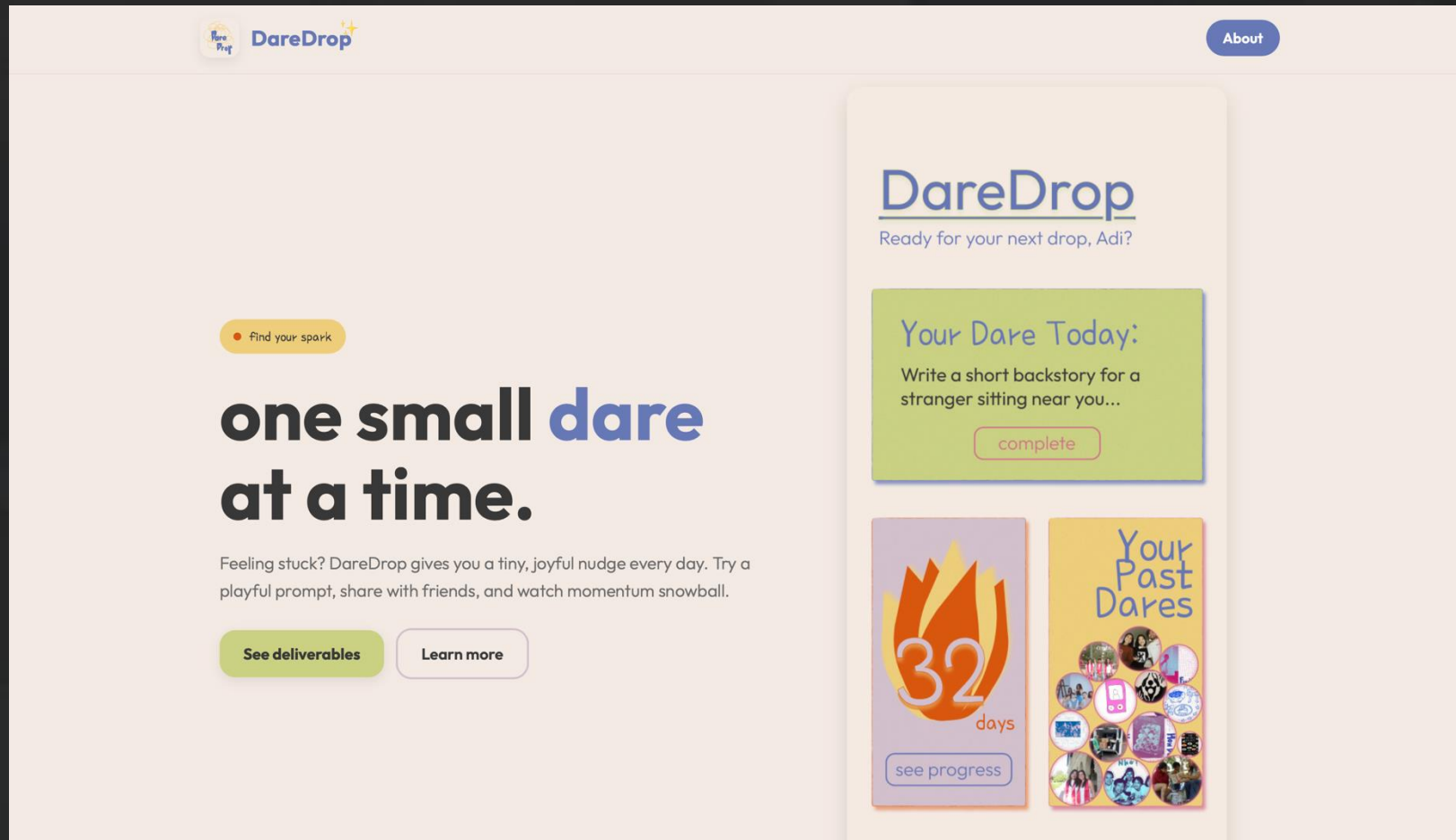
Hi-Fidelity



Motimates

<http://cs147.stanford.edu>

- Project web sites w/ all materials



cs147.stanford.edu

- Project web sites w/ all materials
- Lecture topics, slides, & video
- Homework assignments

The Projects

- 17 Judges will be picking the best projects (announced 8:45-9 PM)
- Students will have a say by voting for *The Students' Choice Award*

<https://tinyurl.com/cs147-au25-best-pitch>



Thanks! Get Involved!

- Mentor teams next year (mid-quarter feedback)
- Hire students and interns
- Support this project fair financially & HCI+Design research at Stanford

The Judges

- Raphael Ancellin
- Siamak (Ash) Ashrafi
- Francesca Barrientos
- Naren Chittar
- Matthew Jörke
- Grace Lam
- Katya Lavrenova
- Edmund Macaluso
- Neema Moraveji
- Lizi Ottens
- Atharva Patil
- Jack Russo
- Shardul Sapkota
- Leigh Soutter
- Ann Thyme-Gobbel
- Sonia Tiwari
- Elaina Yallen

THANK YOU!



FLORENCE
VENTURE PARTNERS



Computerlaw
Group
LLP

Entrepreneur Law Group PLLC

THANK YOU!

The logo for Inflection AI features the text "Inflection AI" in a black serif font. The word "Inflection" is in a larger size than "AI". A trademark symbol (TM) is positioned to the upper right of the "I" in "AI". Behind the text is a decorative graphic consisting of numerous thin, wavy green lines that create a sense of motion and depth, resembling a stylized wave or a signal waveform.

Inflection AITM

THANK YOU!

FOUNDATION FOR
CREATIVITY
IN DISPUTE RESOLUTION

The Projects

The Students' Choice Award

<https://tinyurl.com/cs147-au25-best-pitch>



We are checking your attendance based on this and on Bingo!

The Judges

- Raphael Ancellin
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THANK YOU!



FLORENCE
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THANK YOU!

Inflection AITM

THANK YOU!

FOUNDATION FOR
CREATIVITY
IN DISPUTE RESOLUTION

AUTUMN 2025
CS 147 – dt+UX
AWARDS

Students' Choice / Best Pitch

Traverse

DareDrop

Chatatouille

Best Poster

MotiMates & Pill Pal

Nomi

Stitch

Greatest Societal Impact

BlooMe

roots

Medi-Pal

Greatest Personal Impact

Pill Pal

tether

roots

Most Novel Product

Traverse

Wayn

Kyro

Best Website

roots

Wayn

Clarus

Best Concept (3)

Flippin

Kyro

Medi-Pal

Best Demo (3)

AI-Cappella

Mathy

Let Em Cook

Best Visual Design (3)

Theo

ShopCrawl

Chatatouille

Bingo Raffle Winners

Marcus Lintott

Gil Silva

Derek Bao

Best Overall Project

Medi-Pal

Mathy

Chatatouille

Concept Videos



Chatatouille

Best Overall Teaching Team



Best Overall Teaching Team

