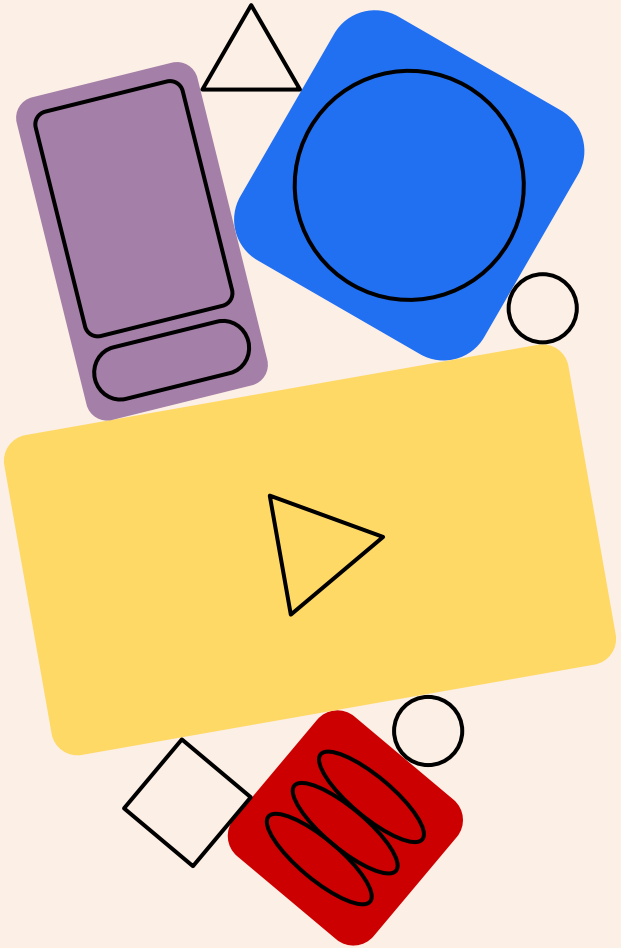
tutti

A8: Interactive High-fi Prototype



Jennifer Lew (’26)

Computer Science (AI)
Palos Verdes, CA

Alex Yansouni (’26)

Computer Science (HCI)
Los Altos, CA

Meghana Paturu (’26)

Computer Science (HCI) & Economics
Belle Mead, NJ

Jonah Blaydes-Greenberg (’26)

Computer Science (AI) & Music
Los Altos, CA

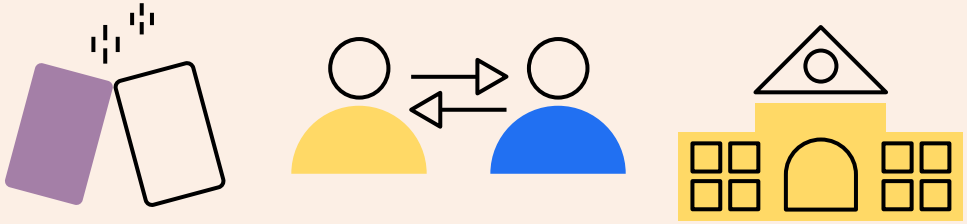
Overview

Problem

1. Students struggle to find quick academic support that ensures **productive** and **impactful** learning sessions
2. Students looking to **gain teaching experience** and earn **extra income** lack a platform to connect with potential tutees

Solution

A free marketplace where students can **efficiently** search for an available tutor and leverage AI to **enhance learning experience**



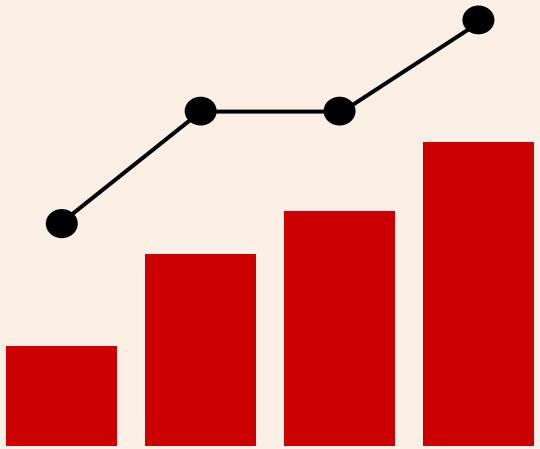
Value proposition

On demand tutoring you can trust

Agenda

1. Heuristic evaluation results
2. UI revisions
3. Prototype implementation status
4. Demo

Heuristic Evaluation Results



High Level Heuristics

93 Heuristic Violation

36 Level 3 and 4 Violations

Most violations on:
H4: Consistency & Standards

“Most of the issues are **cosmetic** or **very minor**.”

Quantitative Summary

Heuristic	# Viol. (sev 0)	# Viol. (sev 1)	# Viol. (sev 2)	# Viol. (sev 3)	# Viol. (sev 4)	# Viol. (total)
H1: Visibility of System Status	0	3	1	1	2	7
H2: Match b/w System & World	0	5	3	1	0	9
H3: User Control & Freedom	0	0	2	3	2	7
H4: Consistency & Standards	0	7	3	0	3	13
H5: Error Prevention	1	0	2	5	2	9
H6: Recognition not Recall	0	2	0	3	1	6
H7: Flexibility & Efficiency of Use	0	1	2	2	3	8
H8: Aesthetic & Minimalist Design	0	8	1	0	0	9
H9: Help Users with Errors	0	1	0	1	1	3
H10: Help & Documentation	0	2	5	1	0	8
H11: Accessible Design	0	1	5	1	1	8
H12. Value Alignment & Inclusion	0	1	2	3	0	6
Total Violations	1	31	26	21	15	93

Qualitative Summary

Visual Design and Aesthetics

- Buttons lack **visual consistency**
- Need for varied colors to highlight key actions
- Use borders/Dividers to break up sections

Accessibility

- Add clickable info bubbles to explain steps
- Improve error message for required text entry
- Ensure **higher contrast** for text for readability

Functionality

- Add a **menu** for viewing/editing requests
- New shortcut for repeating sessions
- Adjust “Search Tutors” flow

Education Theme

- Add student-friendly design elements
- Use n**ew Icons** to brighten the interface
- New education-focused theme

High Severity Violations (Level 4)

H4: Show Meeting Location

Display meeting locations on session request and acceptance

H5: Prevent Back After Payment

Disable back navigation after payment

H5: Add Edit/Cancel for Sessions

Allow users to confirm, edit, or cancel scheduled sessions

H7: Streamline Search

Enable tutor search directly on the home page.

H4: Standardize Report Buttons

Align "view report" and "view AI report" button designs.

H1: Show Payment Status

Display payment status (e.g., escrow, processed, refunded).

High Severity Violations (Level 4) Cont.

H7: Improve DM Button Visibility

Add a DM button on the home page and make it easier to find.

H3: Allow Session Start Without Recording

Add a "continue without recording" option for privacy.

H7: Add New Session Button

Add a clear “new session” button on the home page.

H3: Cancel Recurring Sessions

Include a "cancel recurring" button for easier management.

H6: Mark Recurring Sessions

Add tags to identify recurring sessions on the home page.

H1: Add Calendar View

Create a calendar to view and edit availability.

Major Violations Addressed:

H5: Unable to edit or cancel scheduled session
H3: Need for a more noticeable “new session” button
H6: No indication of recurring sessions
H3: Unable to cancel recurring sessions
H7: Direct Message (DM) button not accessible
H4: Inconsistent button design
H7: No filtering option for session requests
H5: Users able to go back and potentially pay twice.
H1: No indicator for payment state
H3: No option to skip recording
H1: Session confirmation does not include location
H12: No privacy policy during recording sessions
H2: Login page lacking information about the app

Not Yet Addressed:

H12: Feature to report unsafe behavior
H3: Limit location options with map or preset options
H6: More customizable recurring sessions
H4: Ensure minimum button size requirement
H12: Error messages for every input

Time Constraints:

Some features (such as the calendar) may require more development time than was available.

Low Priority:

Detailed inclusivity or consistency improvements across all pages are less important than other features

Main Takeaways

Design

Interface lacks visual consistency and intuitive organization to help users navigate platform

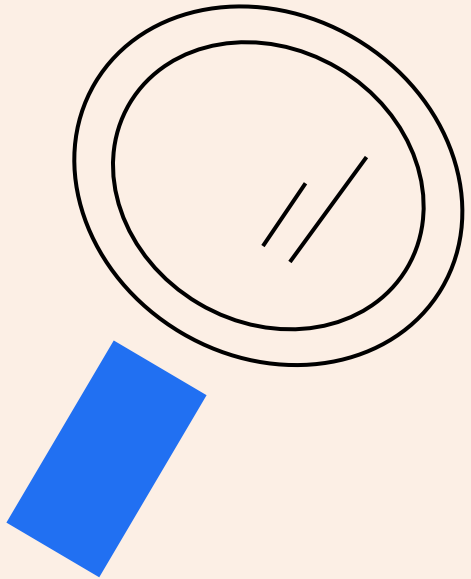
Accessibility

Insufficient instructions and context to guide users and lack of real-time feedback

Functionality

Certain processes are inefficient and fail to provide users with the control and flexibility

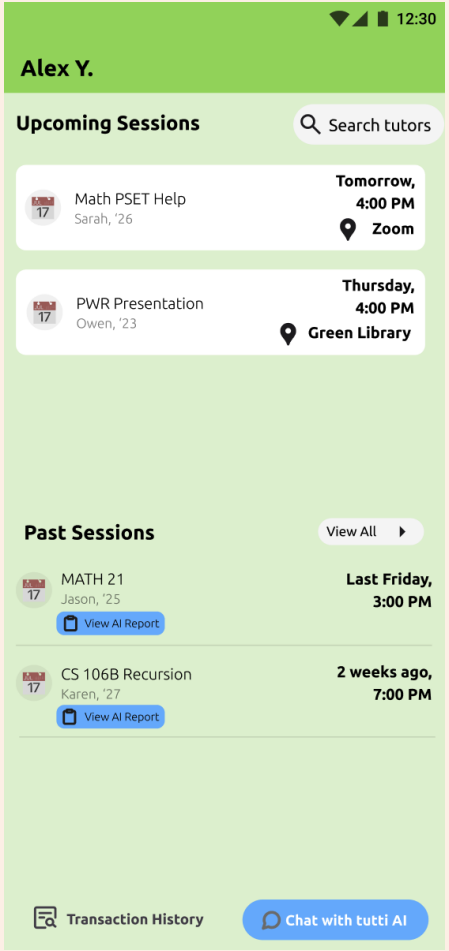
Design Revisions



Home Page

Severity: 4

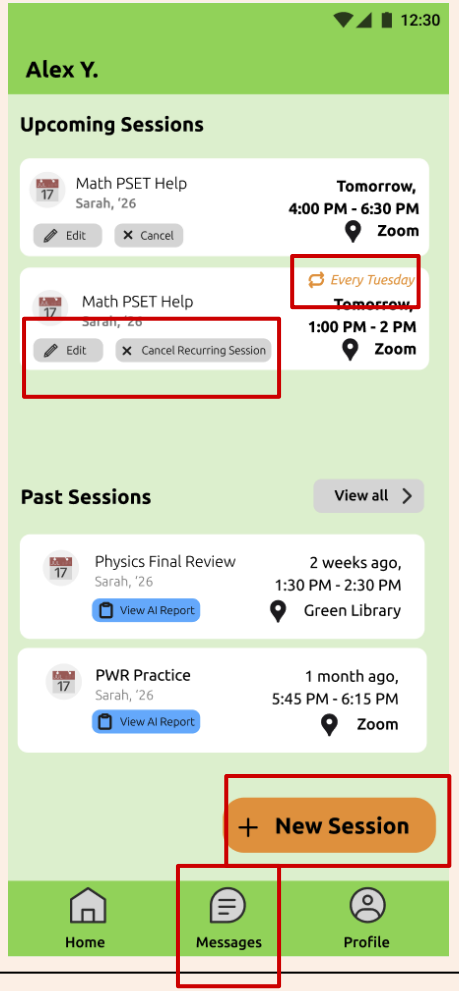
- H5: Unable to edit or cancel scheduled session
- H3: Need more noticeable “new session button”
- H7: unclear that “Search tutors” leads to new session
- H6: No indication of recurring session
- H3: Unable to cancel recurring session button
- H7: DM button not accessible



Revised Homepage

Fix:

1. Add edit/cancel session buttons
2. Accessible new session button
3. Clear navigation bar



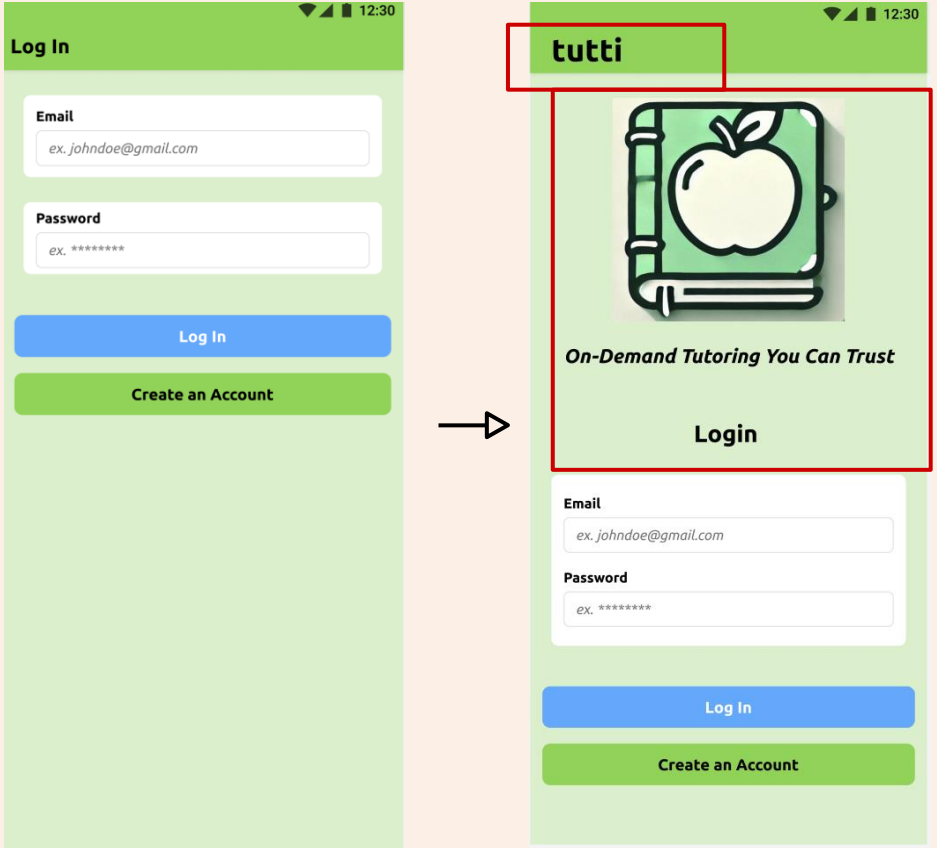
Login

Severity: 3

H2: Login page lacking information about the app

Fix:

1. Add tutti logo and app name on login
2. Include value proposition



Create an Account

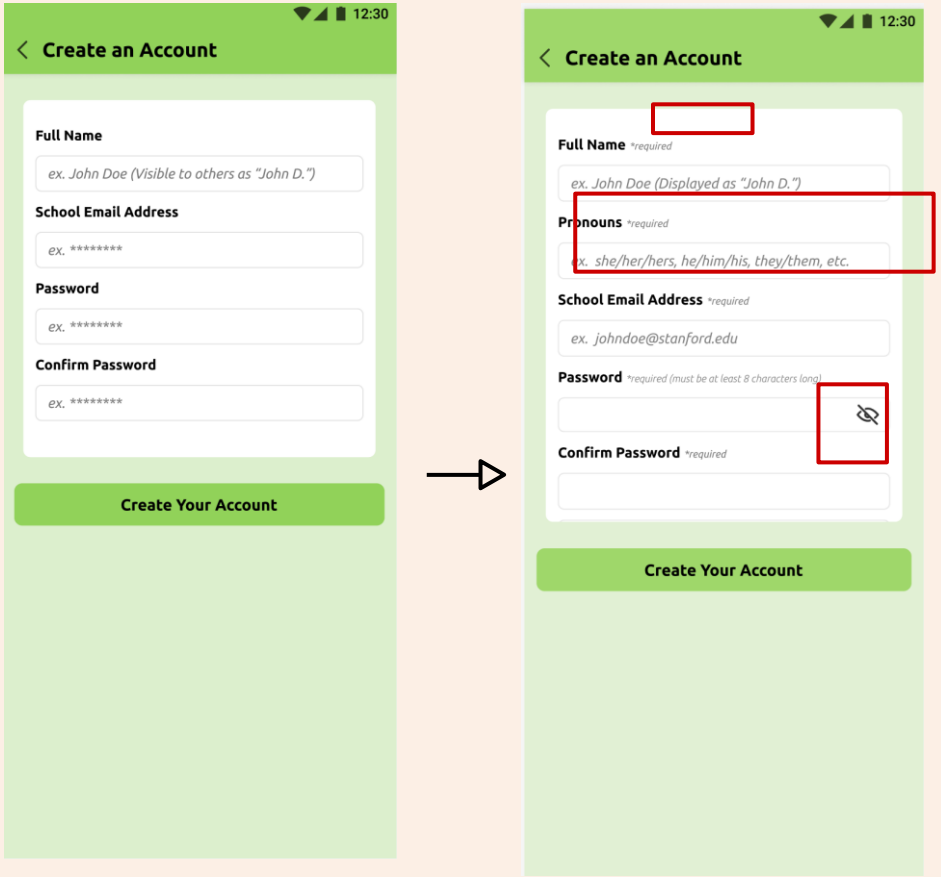
Severity: 3

H3: Missing information for valid inputs and required fields

H12: Lacking pronouns for inclusivity

Fix:

1. Add pronoun field
2. Indicate required fields
3. Add visibility button for password privacy

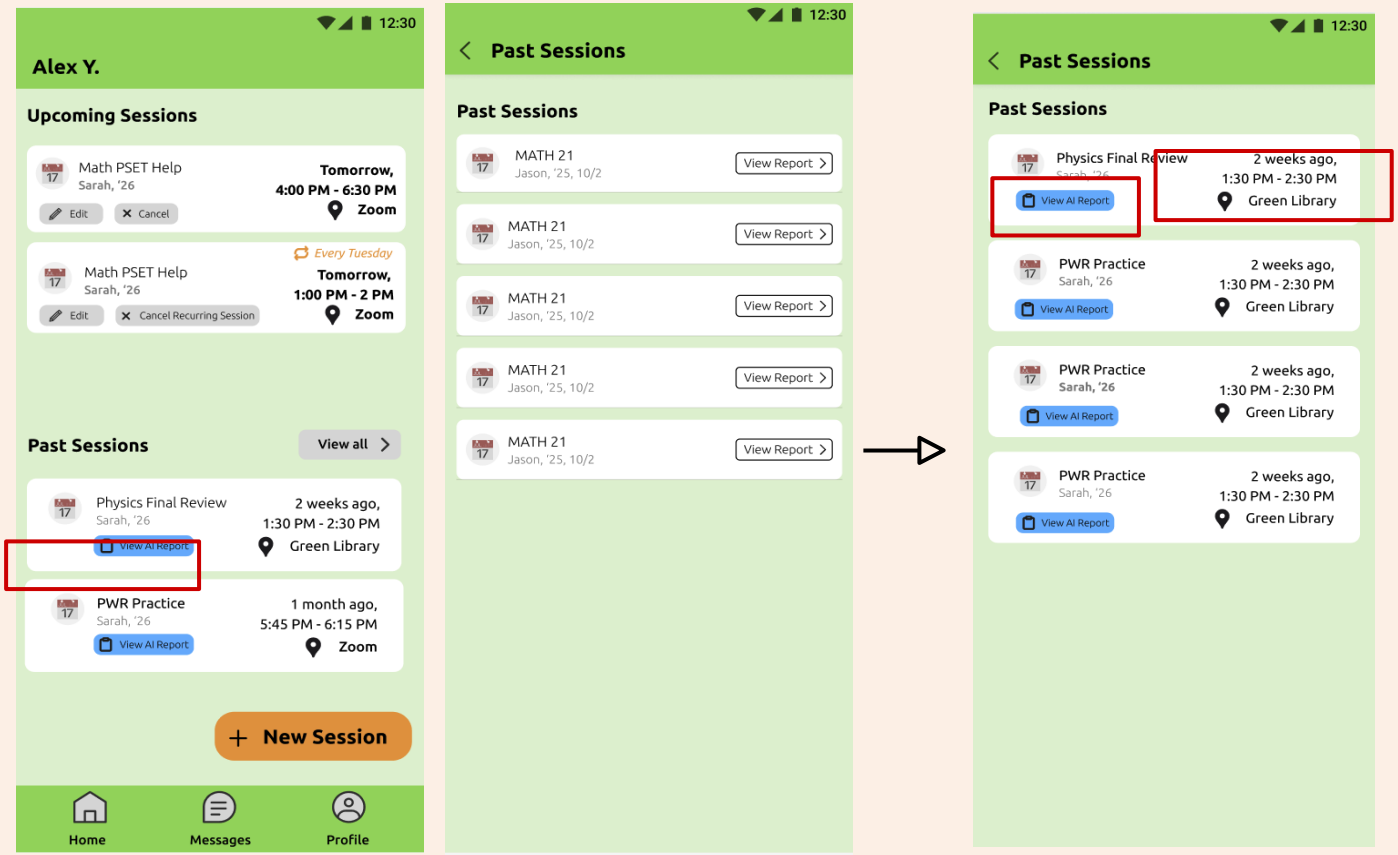


Past Sessions:

Severity: 4

H4: Inconsistent button design

H6: Past session list last session information



New Session Request

Severity: 3

H5: Lack input validation for session request

H7: No filtering option -> less efficient

Fix:

1. Add “Apply Filter” button for more personalized results
2. Guiding question on what to search
3. Reworded page title for clarity

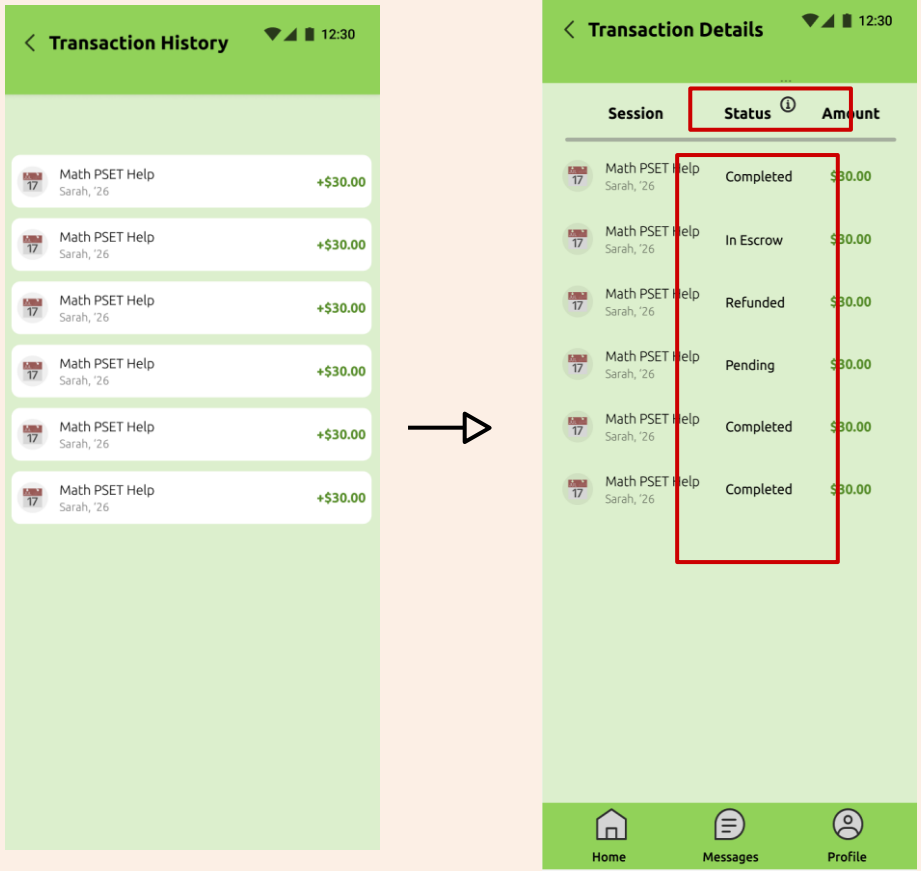
Transaction Details

Severity: 4

H1: No indicator for payment state

Fix:

1. Organized transaction details
2. Clear display of transaction state
3. Add info button on status meaning



Recording Session

Severity: 4

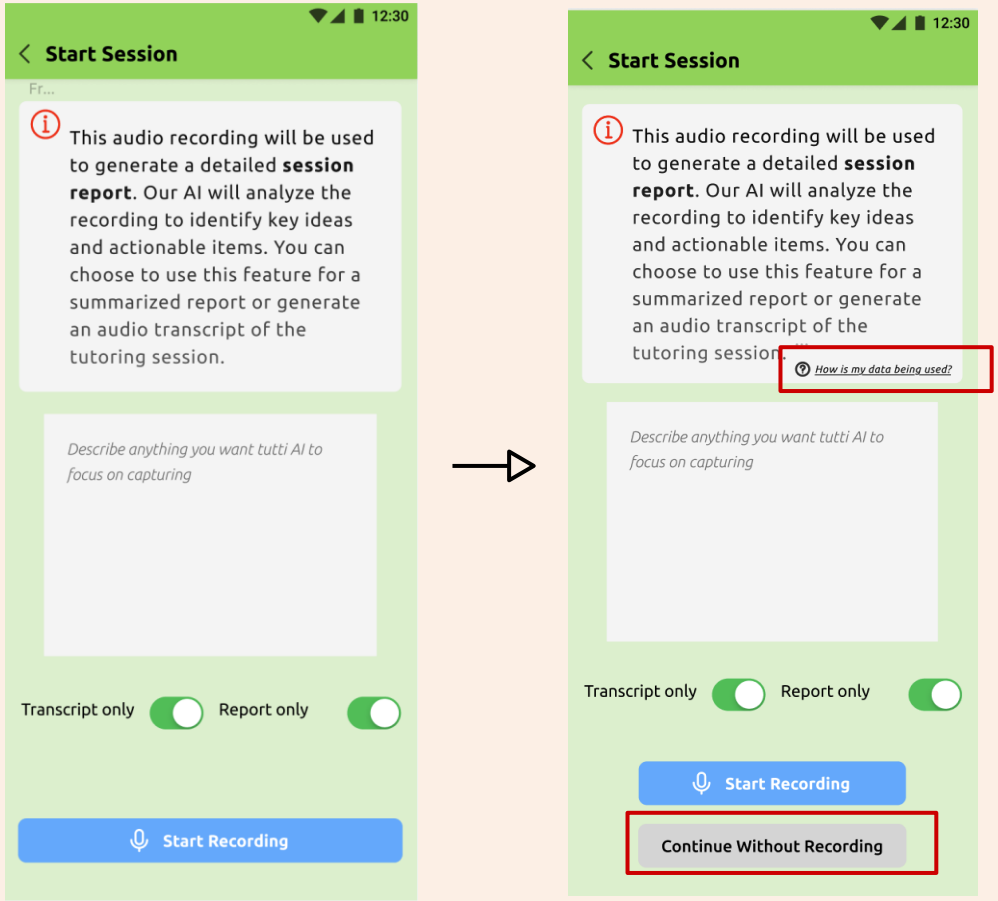
H3: No option to skip recording

Severity: 3

H12: No privacy policy

Fix:

1. Add info button on data privacy
2. Add button to allow user to skip recording



My Profile

Severity: 4

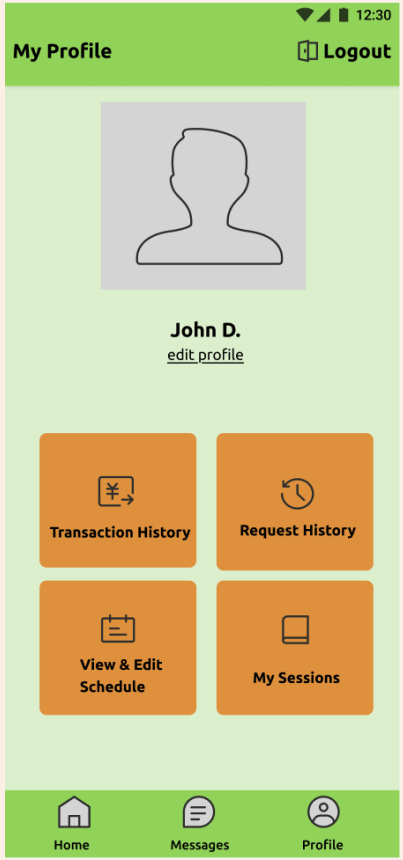
H1: Unable to see current schedule or change it

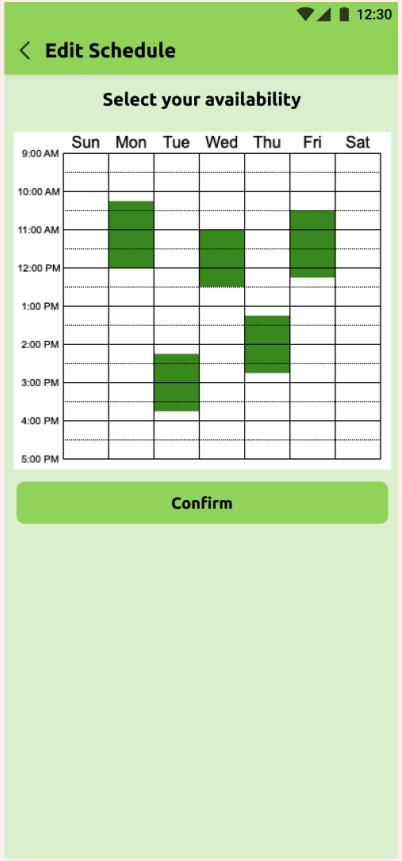
Severity: 3

H3: Missing logout function
H7: Unable to view past requests

Fix:

1. New profile page
2. Buttons to easily access user information





Session Confirmation

Severity: 4

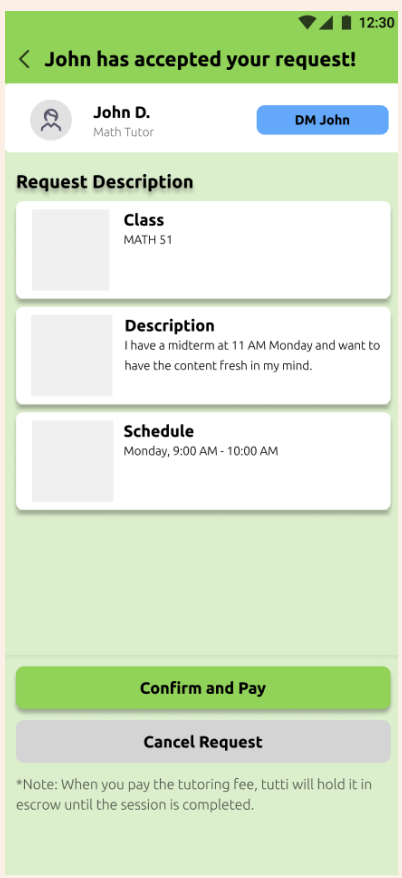
H1: Description does not include session location

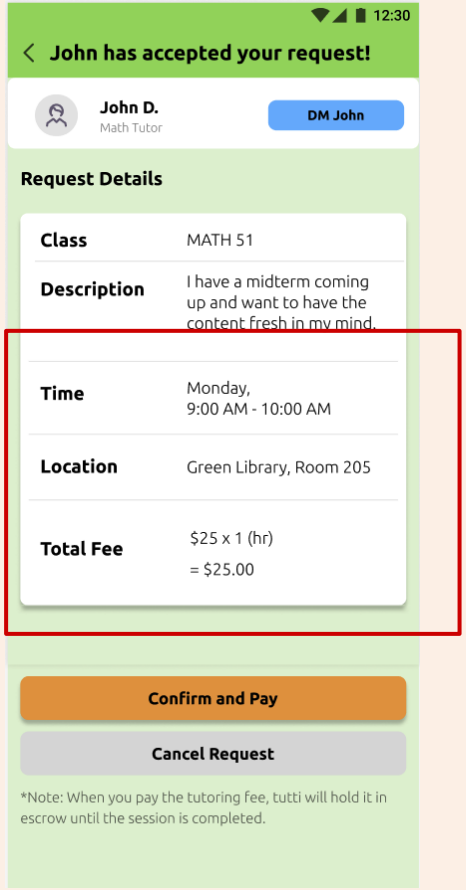
Severity: 3

H6: Unable to recall fee and payment

Fix:

1. Reorganized request description
2. Clear display of tutor fee and location
3. Adjusted button color for branding





Back Buttons

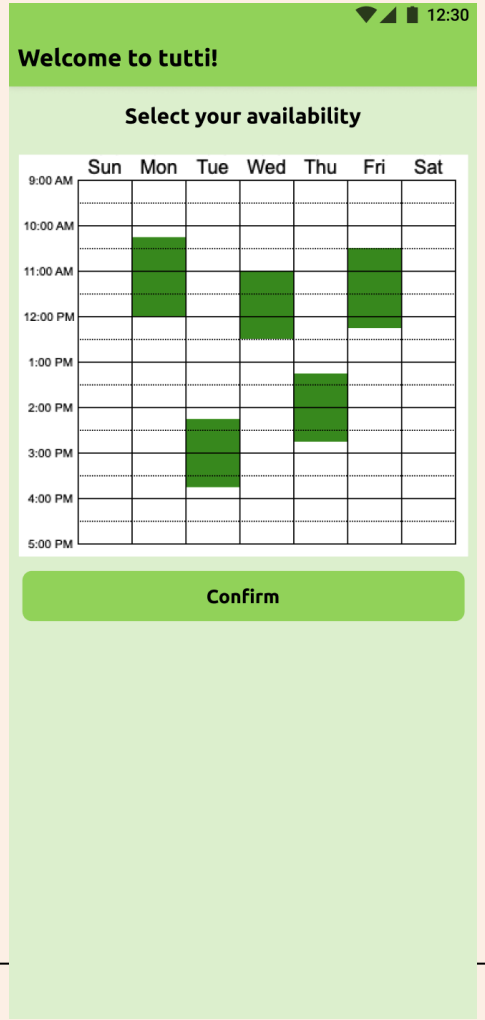
Severity: 3

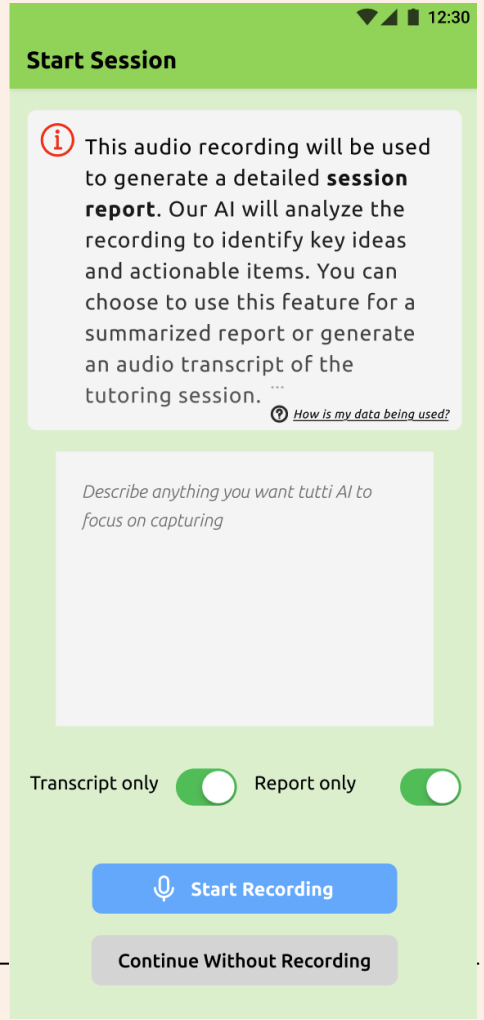
H5: Users are able to go back and potentially pay twice

H5: Not intuitive to go back after creating account

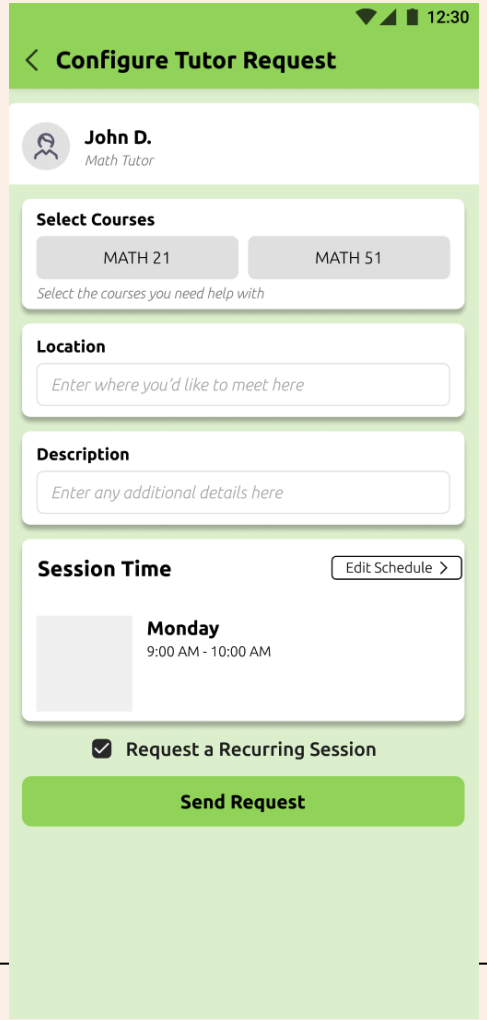
Fix:

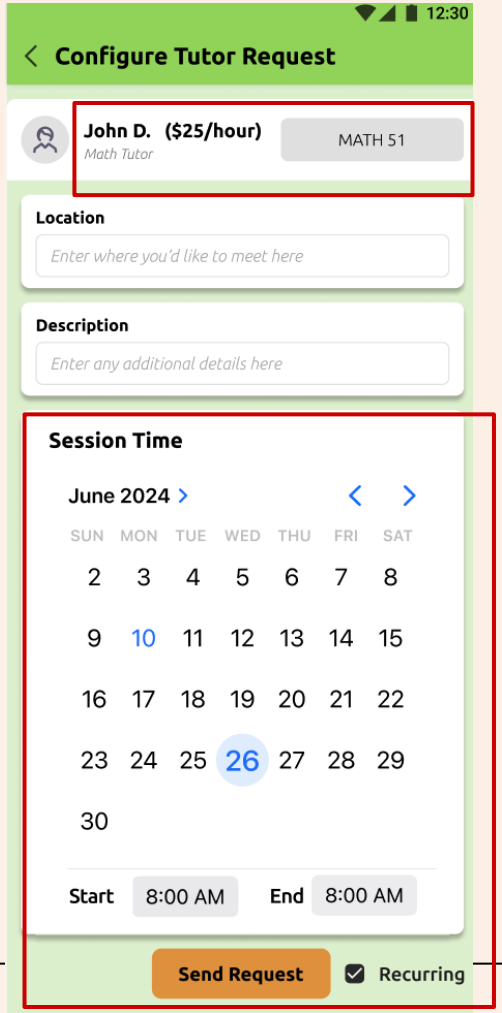
1. Remove unnecessary back buttons to avoid confusion and unintended actions



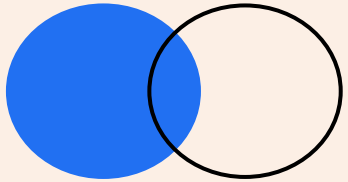


Some additional changes!





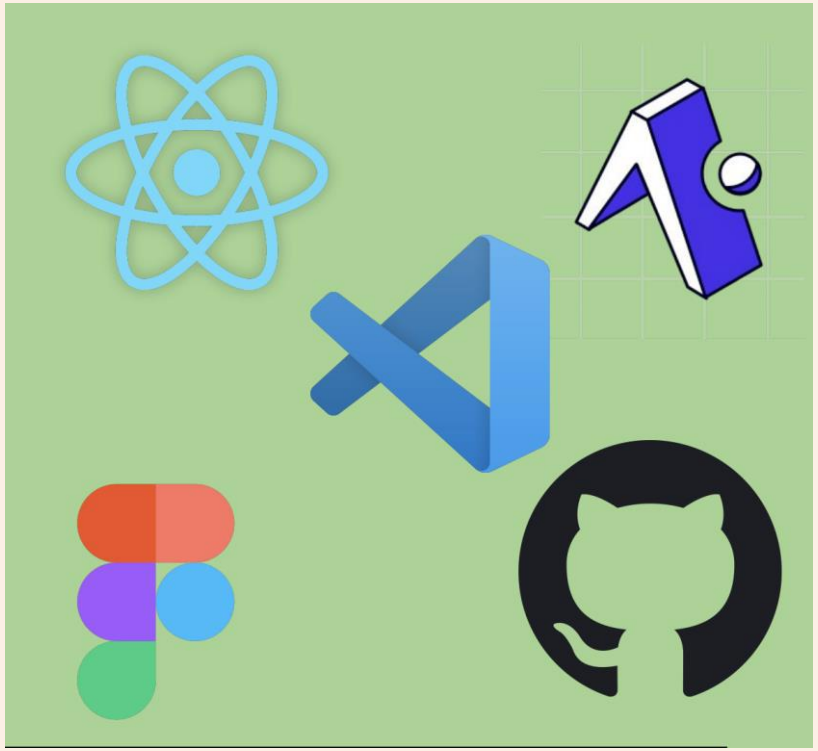
Usability Goals Progress



Usability Goals	Hifi Improvements
Make the app an enjoyable experience	Adjusted color scheme and reorganized information to be easily recognizable
Allow users to perform tasks quickly with minimal effort.	Created new buttons and more intuitive paths to accomplish common user tasks
Protect users and their data at all times	Allow users to opt-out of privacy-sensitive tools and provide clarity on how data is being used

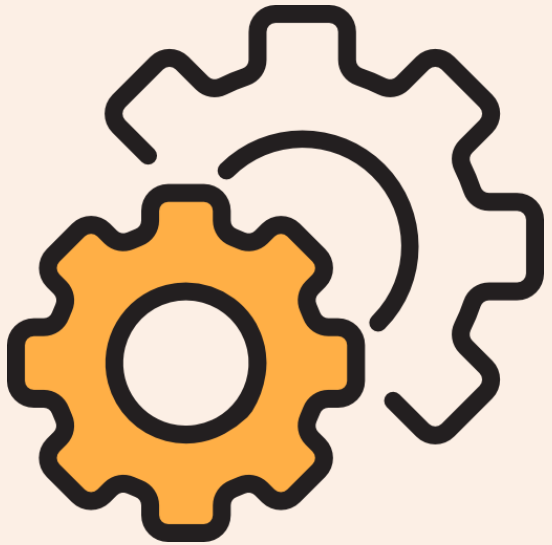
Tools:

- React Native (application framework)
- Expo (building and
- simulation)
- Visual Studio Code (IDE)
- Figma (for design
- components)
- GitHub (collaboration)
- Additional resources (reactnative.dev)



Hard Coded Features

- Tutor Profile Information
- Upcoming/Past Session Details (date, time, location)
- Class Search + Tutor Search Results (student reviews, ratings, etc.)



Implemented Features

User Account Management

- Log in and sign-up functionalities are operational.
- Profile setup, including bio and schedule

Session Requests

- Users can request new tutoring sessions with initial setup.
- Search by class and see available tutors

Home Page

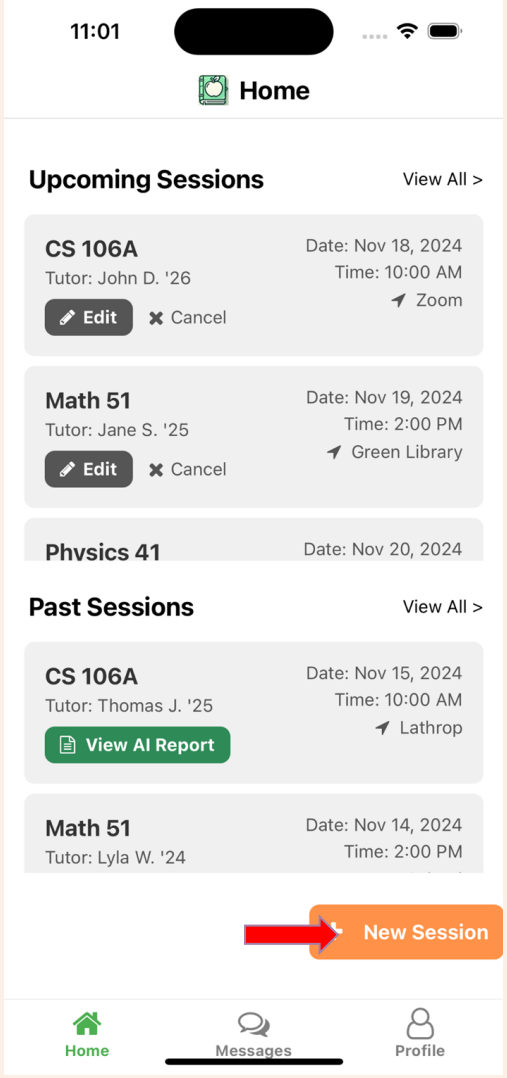
- Tutor profile information display.
- Upcoming and past session details (date, time, location).
- Class and tutor search results with ratings and reviews.

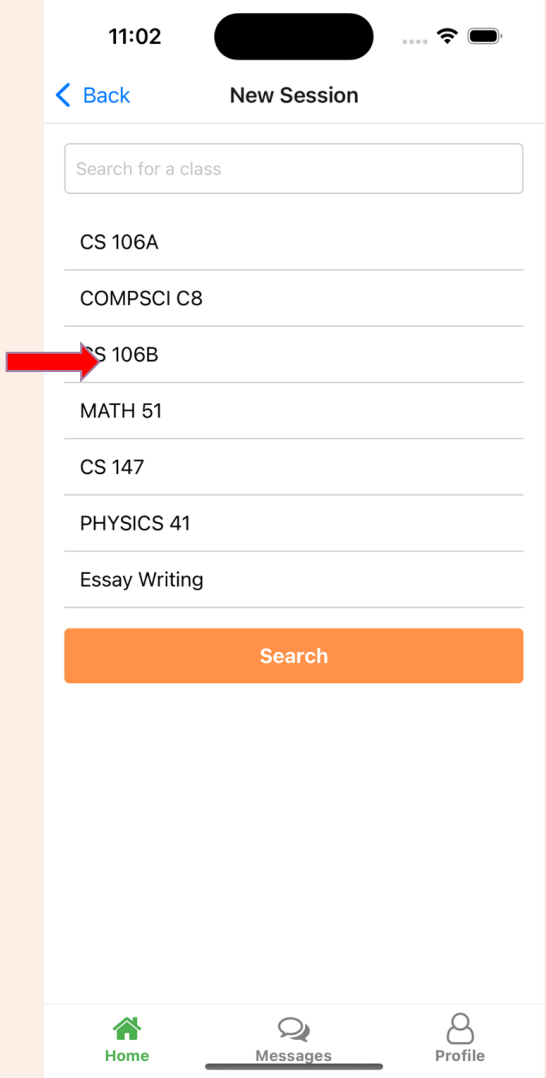
Calendar Integration and Session Creation

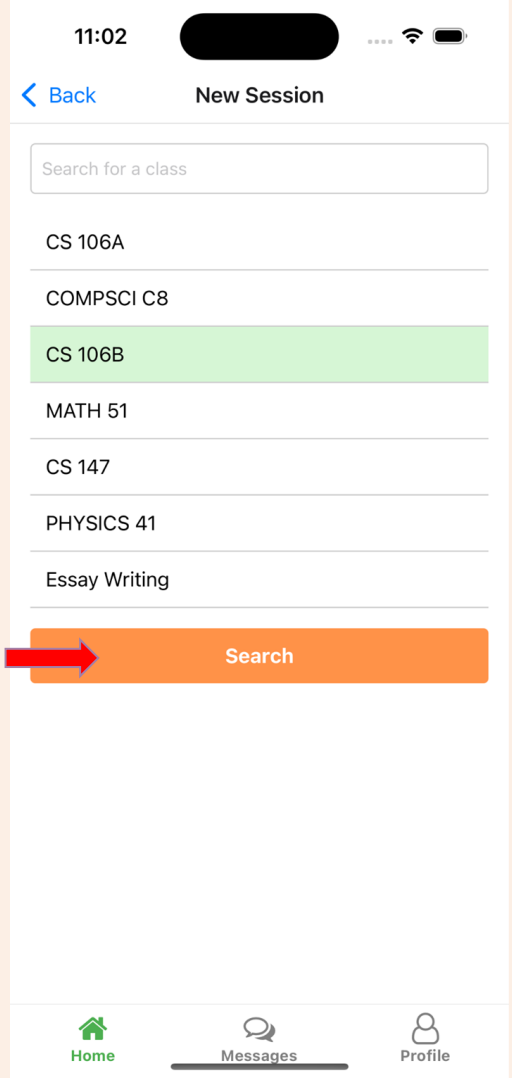
- Set up and manage your availability
- Set your rate and class you would like to tutor

Task Flow 1:

Request a Tutoring Session


11:01
Home
Upcoming Sessions
View All >
CS 106A
Tutor: John D. '26
Edit
Cancel
Date: Nov 18, 2024
Time: 10:00 AM
Zoom
Math 51
Tutor: Jane S. '25
Edit
Cancel
Date: Nov 19, 2024
Time: 2:00 PM
Green Library
Phvsics 41
Date: Nov 20, 2024
Past Sessions
View All >
CS 106A
Tutor: Thomas J. '25
View AI Report
Date: Nov 15, 2024
Time: 10:00 AM
Lathrop
Math 51
Tutor: Lyla W. '24
Date: Nov 14, 2024
Time: 2:00 PM
New Session
Home
Messages
Profile


11:02
Back
New Session
Search for a class
CS 106A
COMPSCI C8
CS 106B
MATH 51
CS 147
PHYSICS 41
Essay Writing
Search
Home
Messages
Profile


11:02
Back
New Session
Search for a class
CS 106A
COMPSCI C8
CS 106B
MATH 51
CS 147
PHYSICS 41
Essay Writing
Search
Home
Messages
Profile

11:03

New Session Search Results

Alex Y.
CS 106A
$20/hr
View Profile

Jennifer L.
CS 106A
$20/hr
View Profile

Home Messages Profile

11:04

Back Tutor Profile

Alex Y. '26
Average Rating: **4.9/5 stars**

Relevant Grades
CS 106B: A
CS 106A: A+

Tutoring Rate
$20/hour

Student Reviews
Alex helped me prepare for my CS106A midterm. I would've failed without him. 4.5/5 stars
Alex is great at breaking down concepts (especially recursion) into simpler terms. 4/5 stars

Availability
- Monday: 9am - 12pm
- Tuesday: 4pm - 6pm
- Thursday: 2:30pm - 5pm

Continue

Home Messages Profile

11:04

Back Configure Tutor Request

Alex Y.
CS106A Tutor

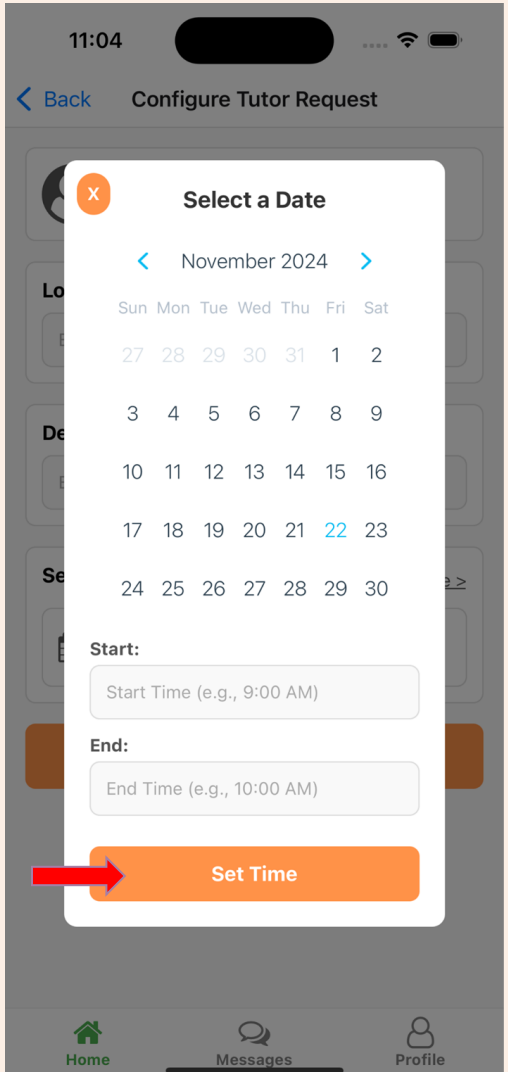
Location
Enter where you'd like to meet here

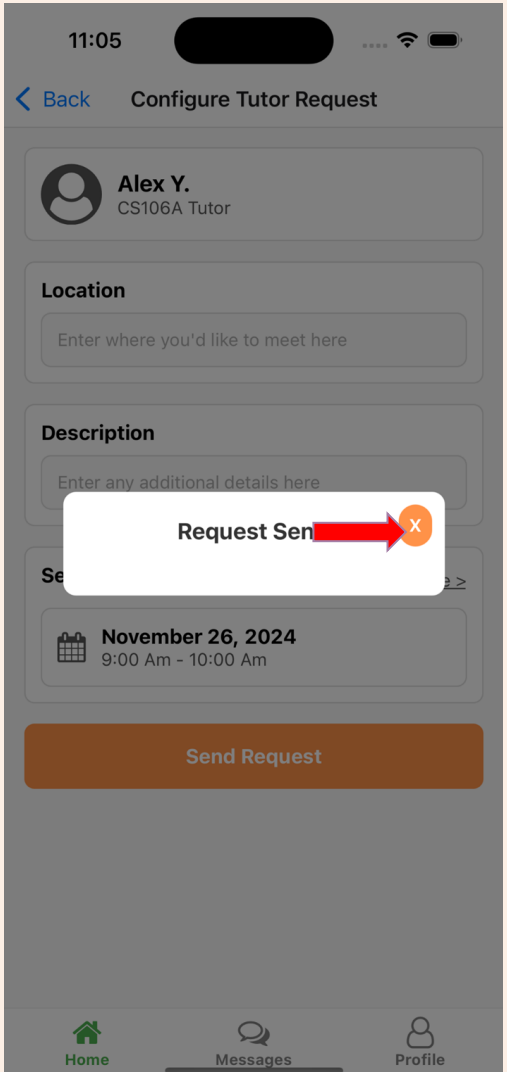
Description
Enter any additional details here

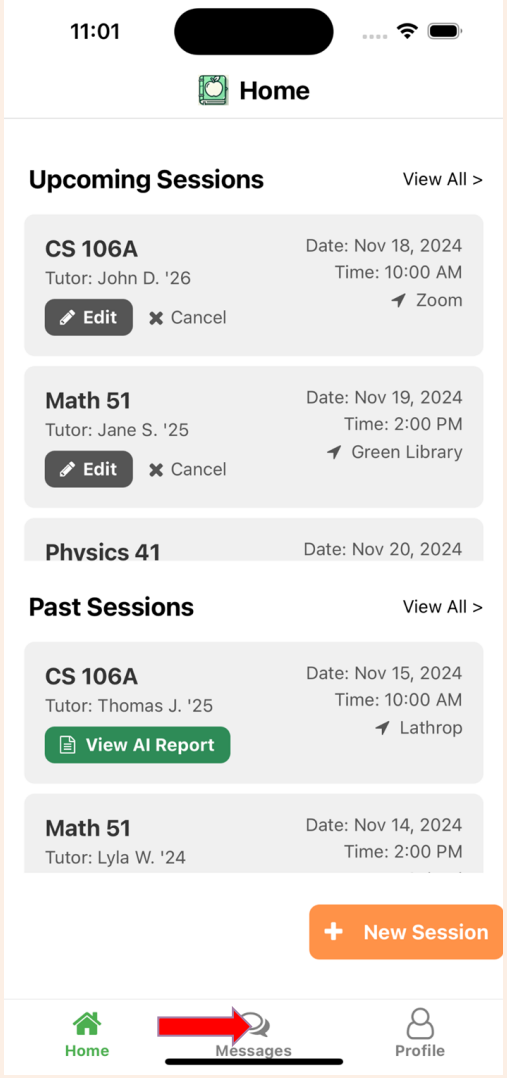
Session Time Edit Schedule >
Select Date
Set Time

Send Request

Home Messages Profile


11:04
Back
Configure Tutor Request
Select a Date
November 2024
Sun Mon Tue Wed Thu Fri Sat
27 28 29 30 31 1 2
3 4 5 6 7 8 9
10 11 12 13 14 15 16
17 18 19 20 21 22 23
24 25 26 27 28 29 30
Start:
Start Time (e.g., 9:00 AM)
End:
End Time (e.g., 10:00 AM)
Set Time
Home
Messages
Profile


11:05
Back
Configure Tutor Request
Alex Y.
CS106A Tutor
Location
Enter where you'd like to meet here
Description
Enter any additional details here
Request Sen
November 26, 2024
9:00 Am - 10:00 Am
Send Request
Home
Messages
Profile


11:01
Home
Upcoming Sessions
View All >
CS 106A
Tutor: John D. '26
Edit
Cancel
Date: Nov 18, 2024
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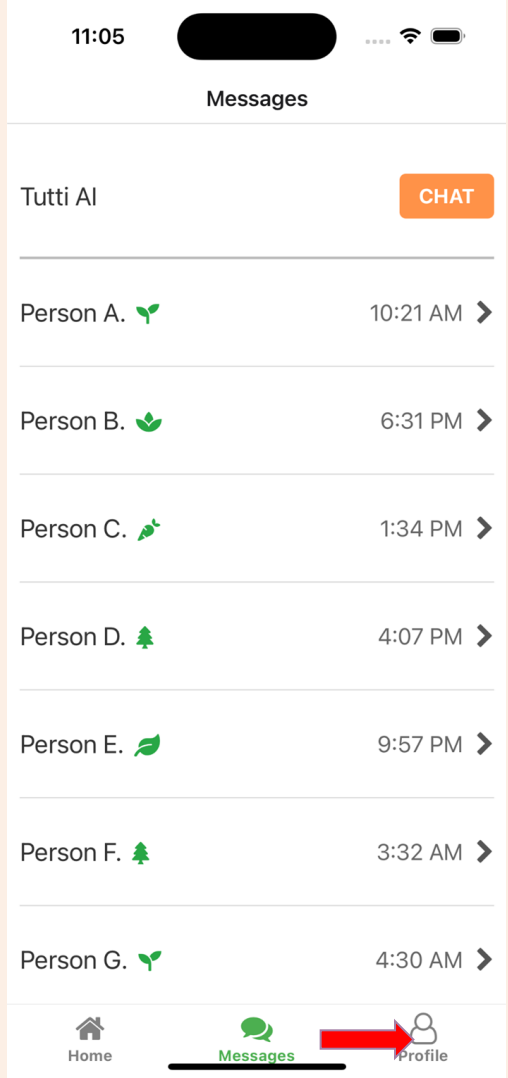
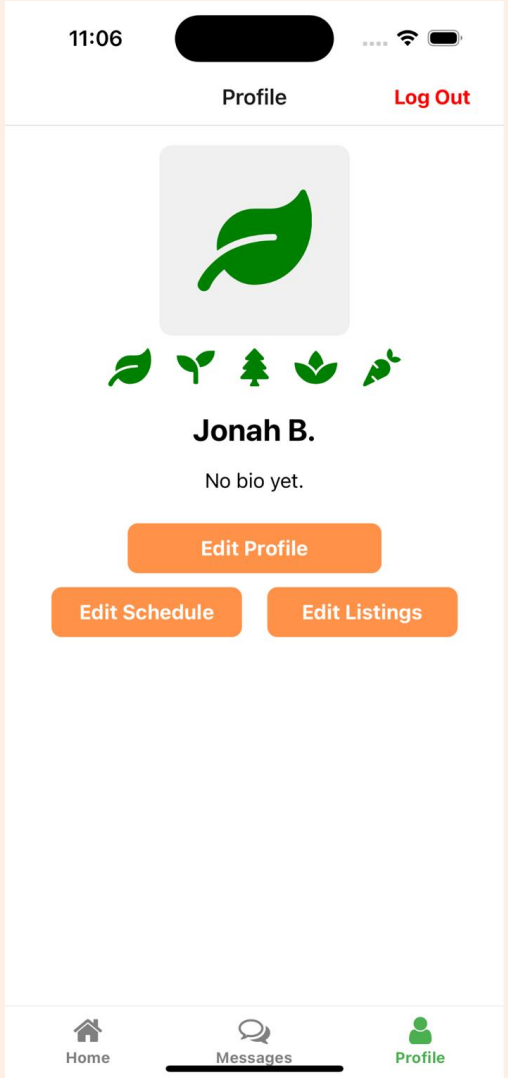
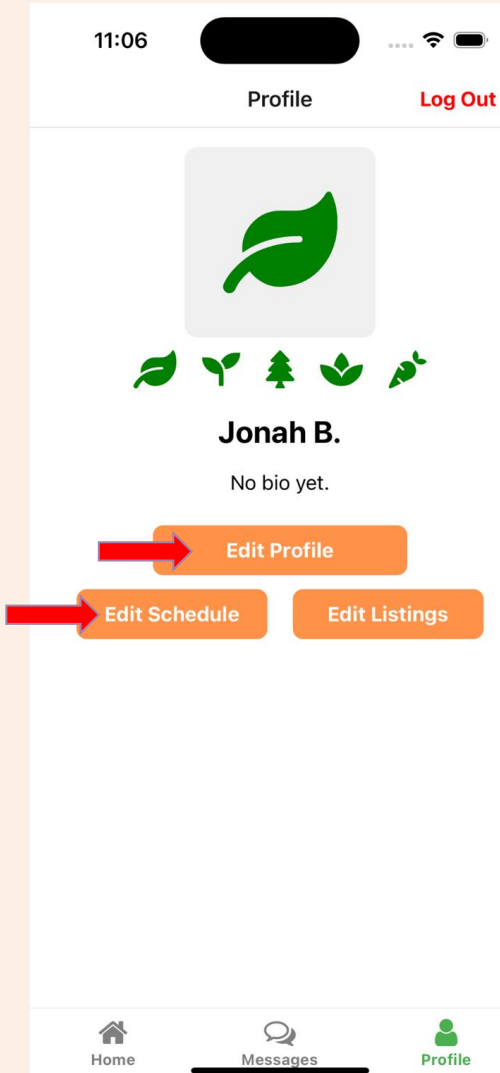
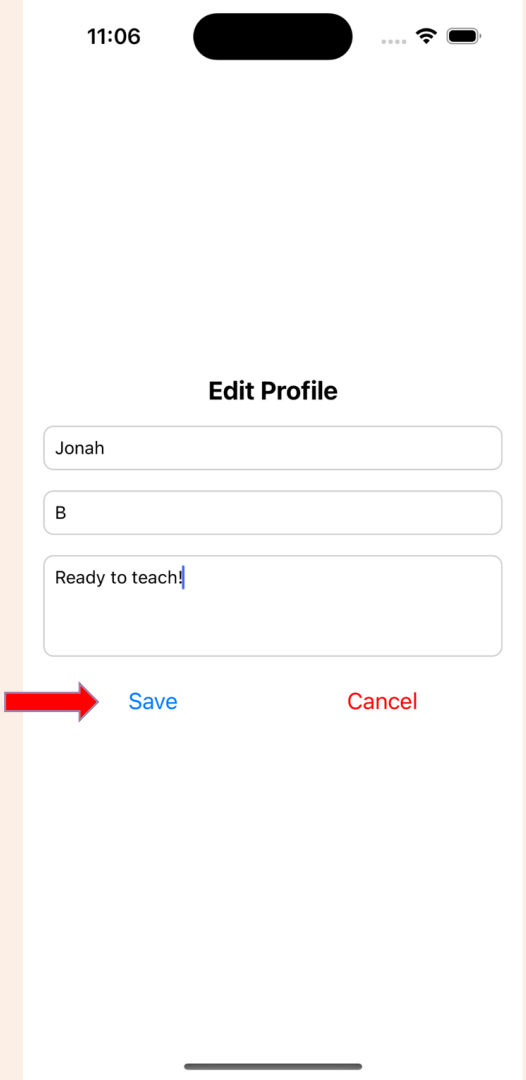
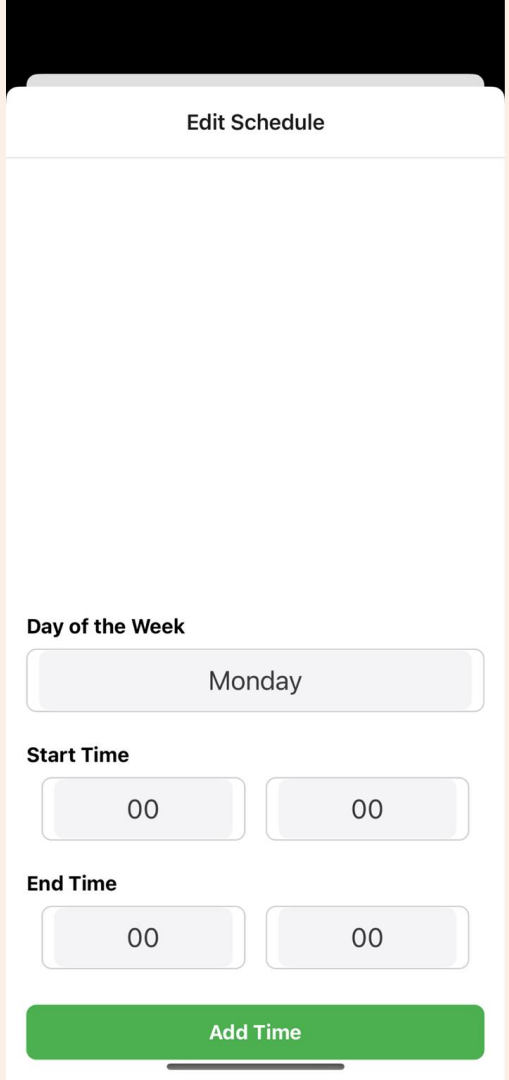
Green Library
Phvsics 41
Date: Nov 20, 2024
Past Sessions
View All >
CS 106A
Tutor: Thomas J. '25
View AI Report
Date: Nov 15, 2024
Time: 10:00 AM
Lathrop
Math 51
Tutor: Lyla W. '24
Date: Nov 14, 2024
Time: 2:00 PM
New Session
Home
Messages
Profile

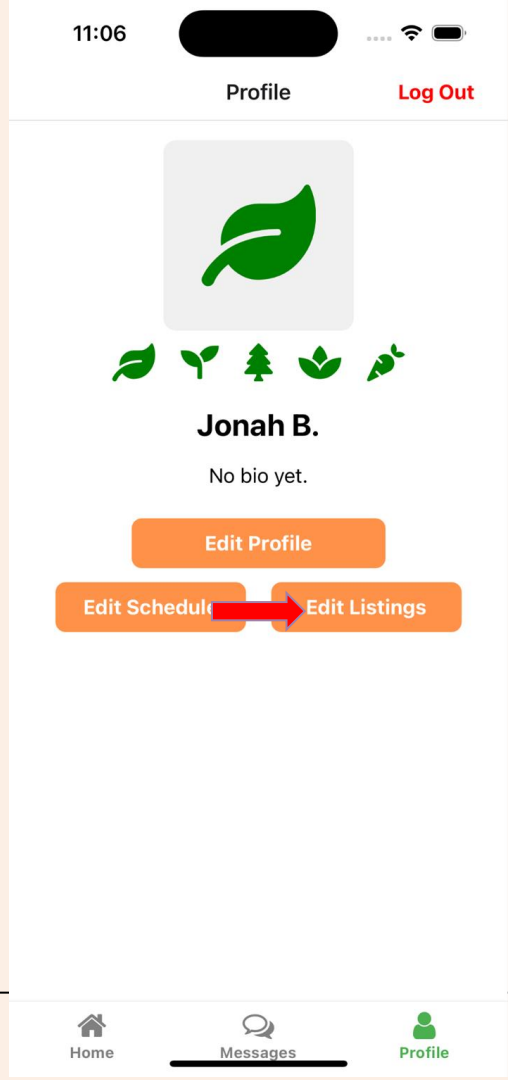

11:05
Messages
Tutti AI
CHAT
Person A.
10:21 AM
Person B.
6:31 PM
Person C.
1:34 PM
Person D.
4:07 PM
Person E.
9:57 PM
Person F.
3:32 AM
Person G.
4:30 AM
Home
Messages
Profile

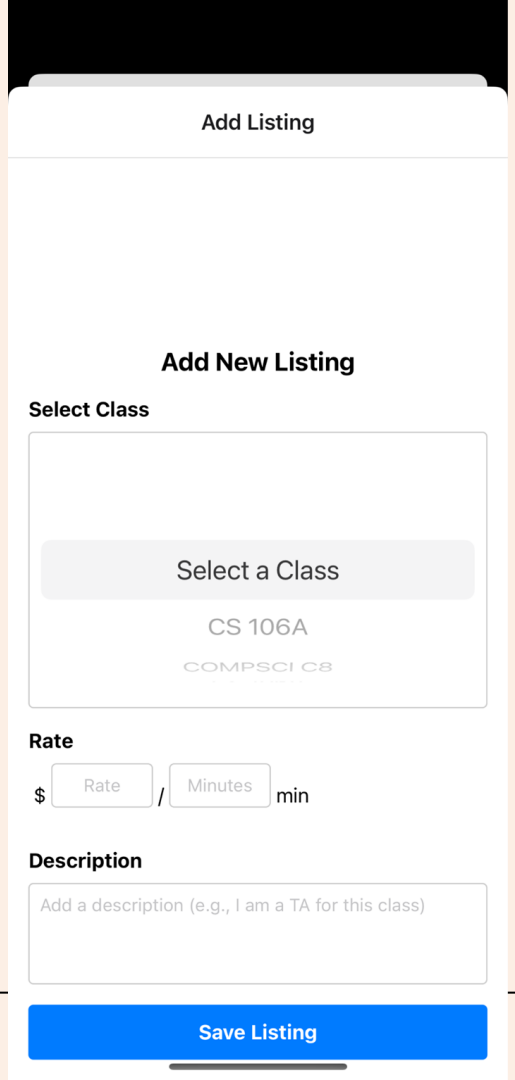

11:06
Profile
Log Out
Jonah B.
No bio yet.
Edit Profile
Edit Schedule
Edit Listings
Home
Messages
Profile

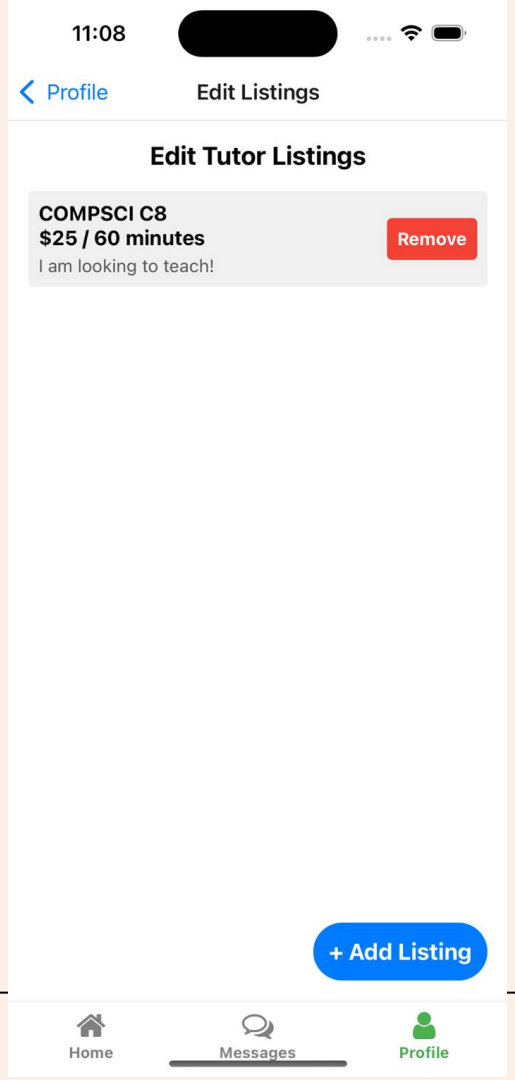

11:06
Profile
Log Out
Jonah B.
No bio yet.
Edit Profile
Edit Schedule
Edit Listings
Home
Messages
Profile


11:06
Edit Profile
Jonah
B
Ready to teach!
Save
Cancel


Edit Schedule
Day of the Week
Monday
Start Time
00
00
End Time
00
00
Add Time


11:06
Profile
Log Out
Jonah B.
No bio yet.
Edit Profile
Edit Schedule
Edit Listings
Home
Messages
Profile


Add Listing
Add New Listing
Select Class
Select a Class
CS 106A
COMPSCI C8
Rate
$
Rate
/
Minutes
min
Description
Add a description (e.g., I am a TA for this class)
Save Listing


11:08
Profile
Edit Listings
Edit Tutor Listings
COMPSCI C8
$25 / 60 minutes
I am looking to teach!
Remove
+ Add Listing
Home
Messages
Profile

Unimplemented Features

Communication Tools

- Chat functionality between students and tutors.
- Chat functionality with the AI

Session Management

- Editing or canceling upcoming sessions via a home bar calendar
- Adding tags to mark recurring sessions

Integration and Advanced Functionality

- Integration between students requesting sessions and tutors receiving requests
- Ability to start a session without recording
- Filtering options for session requests.
- Indicators for recurring sessions

AI-Driven Features

- Viewing AI-generated tutoring reports.
- AI Chat bot

Plan for finishing

Prioritize High-Impact Features

- Editing and canceling upcoming sessions.
- Adding a new home bar calendar view to manage availability.
- Implementing filters for session requests.

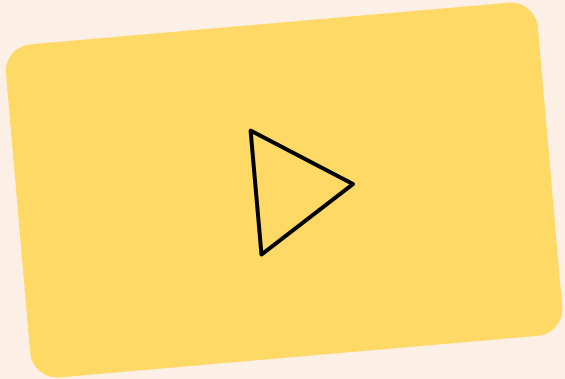
Enhance Communication

- Add chat and DM functionality
- Add notifications for when you receive a session request as a tutor
- Add pop up notifications for when you receive a message

Complete AI Integration

- Build and integrate the AI report-viewing feature.
- Ensure reports provide value alignment and inclusivity, as highlighted in heuristic evaluation.

Ensure Accessibility and Privacy

- Implement privacy options (e.g., AI usage, option to skip recording).
- Add inclusive design elements, such as a pronoun field in the signup process.

Demo