

**Abstract:**

Our focus is centered on the crucial task of expanding cultural engagement and community service in the diverse landscape of Los Angeles and Southern California, with a particular focus on enabling undergraduate students at UCLA to engage with these communities. In the process of understanding the domain, we've identified key issues and design problems that need to be addressed.

One of the foremost challenges hindering meaningful engagement is transportation. Service activities often require students to travel off-campus, and the vast urban expanse of Los Angeles presents significant logistical challenges. Current transportation options, including ride-sharing services, are often unreliable and costly, leaving students in need of a more efficient and affordable solution.

In response to this need, our proposed solution centers on developing a students-only carpooling application. This application aims to provide a streamlined means of transportation to service activity locations and foster a greater sense of community among students. While we acknowledge the limitations in altering the broader Los Angeles public transportation system, our platform seeks to simplify the process of reaching these vital off-campus locations – improving accessibility to community engagement activities and locations.

Our design framework centers around creating an intuitive application that not only addresses transportation issues but also integrates a calendar feature. This feature will empower students to stay informed about cultural and community engagement events, thus enhancing discoverability and accountability. Furthermore, the application will facilitate the formation of groups of like-minded students who can attend these events together, promoting a stronger sense of community and shared purpose.

In summary, our project's main focus is to tackle the transportation challenge by designing a carpooling application specifically tailored for UCLA students. We aim to make cultural engagement and community service more accessible and to cultivate a culture of giving back to the multifaceted communities of Los Angeles and Southern California.

ChatGPT Process History:

<https://chat.openai.com/share/c25fb8f1-278e-430d-a3a0-c42d6936b2c6> (used to condense the human-written points into the word limit by feeding information on the

prompt and Brief #3, and ensure that the focus of the points were relevant to the needs and design thinking between identifying issues of the abstract. Also used to check for any grammatical errors)

## Assignment 4 Roadmap

	Questions	Plan
Meeting 1	<ul style="list-style-type: none"><li>- What do we know about the issue?</li><li>- What do we want to find out about the issue?</li></ul>	<ul style="list-style-type: none"><li>- Reflecting on what we know, current experiences of transport in UCLA (15 min)</li><li>- Come up with interview questions (25 min)</li><li>- Distributing the research between group members (5 min)</li></ul>
Independent Research	<ul style="list-style-type: none"><li>- What has already been discovered about transportation problems for UCLA students?</li><li>- What is the experience of UCLA students who need transportation?</li><li>- What are some previous attempts to solve this problem?</li></ul>	<ul style="list-style-type: none"><li>- Literature review: review articles about<ul style="list-style-type: none"><li>- Transportation in LA</li><li>- Transportation for college students</li><li>- Carpooling as a concept</li></ul></li><li>- Assessment of competitors / current problem<ul style="list-style-type: none"><li>- try to get a rideshare on the Facebook group / join the Facebook group and do observations</li><li>- try taking the bus in LA / plot the routes</li><li>- create user story for a current traveling ucla student</li></ul></li><li>- Structured Interview (5 min each)<ul style="list-style-type: none"><li>- Student with car</li><li>- Student without car</li><li>- Optionally: If someone on the carpool Facebook page is happy to talk to us about their experiences</li></ul></li><li>- Focus group interview (15 min)<ul style="list-style-type: none"><li>- A good mix of students with cars and without cars</li><li>- Again, it would also be helpful if we could recruit people who</li></ul></li></ul>

		have used the carpool Facebook page, or regularly carpool
Meeting 2	<ul style="list-style-type: none"> <li>- How can we summarize our research?</li> <li>- How has our research changed our product?</li> </ul>	<ul style="list-style-type: none"> <li>- Reflect on what we have learnt through the research process (15 min)</li> <li>- Synthesize the presentation (30 min)</li> </ul>

## **Assignment 5 Roadmap**

With an idea of what we want to build, and using qualitative (and possibly quantitative) data from assignment 4's user research, we can begin to see user goals, pain points, use cases, and opportunities to explore in our design sprint.

### Detailed Breakdown of Tasks

- As a group of 5, we would ideally divide up the tasks so that everyone is equally involved in the design process and agrees with the implementation of research process insights. An initial breakdown of tasks would look like this:

### User Personas, Objectives, and User Journey

- We would use key user data and takeaways to build a general persona and user profile of the demographic we are researching and targeting. 2 people should work on this as an initial step to finalize any targeted design choices.
- 1 Person should work on the objectives section, centralizing key stakeholder requirements as well as user expectations and combining them into a few use cases/objectives which will define the functionality and interface of our design solution.
- 2-5 people will also work on the user journey as it requires collaborative thinking and a holistic view of the problem and solution's functionality to be able to understand how a user would be interacting with existing problems and our prototype.

### Information Architecture

- Through the user persona, objectives and user journey, we can decide on how we want to organize, structure and label our information, as well as a rough idea of content and context in terms of the users. We can see what people are looking for in a transportation app and implement information architecture that is relevant to our user personas, objectives and user journeys. The whole group should work together on this step.

### Low-fi & wireframe Sketches

- To form a collaborative design process, each member in the group should ideally work on their own sketches. Then, we would use all those sketches, gather commonalities and decide on a finalized low-fi wireframe to base off our high-fi wireframe. This is a really important step because often, people have disagreements in the layout and content which emphasises the importance of objective thinking from each group member when deciding what to finally implement.

## Hi-fi Sketches

- For the purpose of this project, we are planning to build an interactive hi-fi solution to our design problem in Figma.
  - This would provide the most flexibility in terms of Usability testing (such as A/B testing) potential as we are able to make several hi-fi interactive designs.
- Basing off the low-fi wireframes, we should ideally have 2 or 3 complete, interactive hi-fi designs to maximize usability testing potential.
  - We are most likely not going to be implementing co-design methods with stakeholders as that would provide too much of a time and scheduling constraint on both parties.

## Project Schedule, Individual & Group Responsibilities

Since Assignment 5 comes straight after assignment 4, we can assume that there will be around 1 week to complete the design process. Here is a detailed breakdown of how we plan to manage this:

Day	Objectives	Individuals in Charge	Plan
Day 1 - 2	<ul style="list-style-type: none"><li>- User Persona</li><li>- Objectives</li><li>- User Journey</li></ul>	<ul style="list-style-type: none"><li>- Osbert, Vanessa</li><li>- Anne-Marie</li><li>- Mainly Elena, Emily (w/ whole team)</li></ul>	<ul style="list-style-type: none"><li>- By the first day, we should be able to conjure a user persona or several (this includes objectives)</li><li>- On day 2, we would meet and holistically meet to discuss User Journey</li></ul>
Day 2 - 3	<ul style="list-style-type: none"><li>- Information Architecture</li></ul>	<ul style="list-style-type: none"><li>- Whole team</li></ul>	<ul style="list-style-type: none"><li>- Use Goigle docs to asynchronously add aspects of information architecture while discussing it in the group chat</li></ul>
Day 3 - 5	<ul style="list-style-type: none"><li>- Low Fidelity Design</li></ul>	<ul style="list-style-type: none"><li>- Whole team</li></ul>	<ul style="list-style-type: none"><li>- In days 3 and 4, everyone should try and come up with their own thoughts and sketches (w/ layouts</li></ul>

			and components) - On day 5, we will meet and discuss pros and cons of each approach, settling on a final design
Day 5 - 7	- High Fidelity Design	- 2 designs - We will split off into 2 teams of 2 and 3 to each work on a high-fidelity prototype.	- In the 2 and a half days, we will use it o build 2 high-fidelity interactive prototypes which will be used for assignment 6

### Design Goals & Outcomes

- Through this assignment, not only do we want to develop 2 high-fidelity prototypes for usability testing in Assignment 6, but we also want to gain a better understanding of the real-world design process. By the whole group being involved in the entirety of the design process, everyone will get a better understanding of how we can utilize user experience and research to collaborate and build functional designs.
- The high-fidelity designs will be feature level interactive prototypes with a fully defined user flows. We will extrapolate our final low- fidelity prototype and build 2 high-fidelity prototypes that closely aligns with our layout, component and content decisions.

## **Assignment 6: User feedback & design revisions, Due Nov 12**

### Usability Assessment Process:

#### Part 1: Interviews

- Recruitment: 10-15 students currently attending UCLA. Diversity in participants' backgrounds (year, major, hometown, age, living situation, etc.) will be recruited to ensure varied perspectives.
- Setup: The one-on-one interviews will be conducted in a welcoming and comfortable environment (conference room, classroom, etc.) free of distractions. The interviewer will ask participants for consent to record the interview and will proceed if consent is granted.
- Structure: Participants will be told the purpose of the interview (gather feedback and improve app's usability), provided with an overview of the interview process, and asked to think aloud as they interact with the app.
- Questions: Participants will be asked open-ended questions about their transportation needs and ride-sharing experiences (e.g. What are your thoughts on Los Angeles public transportation? What are your means of transportation?)
- Scenarios: Participants will be presented with the app and asked to perform a task based on common scenarios (e.g. Try to find a ride to the Rose Bowl on November 18, 2023). Participants are encouraged to think aloud as they interact with the app and share their observations and challenges.
- Follow-up question: After interacting with the app, participants will be further questioned about their overall experience with the app.

#### Part 2: Focus Group

- Re-Assessment: App design will be altered and adjusted based on participant's feedback from the interview portion.
- Re-Engagement: Participants will be asked to come back (on a different day) for a focus group and presented with the updated app design.
- Interaction: Participants will interact with the updated app.
- Group discussion: Collectively, participants will be asked to compare the updated app to the old design and provide constructive feedback and suggestions.

#### Part 3: Evaluation

- Data analysis: Analyze the feedback from the interviews and focus groups, and identify common themes, issues, and suggestions.
- Iteration: Based on the data analysis, implement necessary changes to further refine and finalize the app design.



## **Assignment 8 & 9 Roadmap**

### **Week 7 (Nov 13-19):**

#### *Assignment 8:*

- Edit the slide deck continuously as the slide deck is added to in the process of completing each assignment and create a cohesive storyline (individually based on who did each roadmap)
- Add speaking notes to the presentation as edited and gather peer feedback (Individual & Group)

### **Week 8 (Nov 20-26):**

#### *Assignment 8:*

- Finalize the presentation speaker notes (individually based on who did which slides)
- Incorporate relevant visuals and continue to refine the slide deck (Individual)
- Practice presentation multiple times (Individual & Group)

#### *Assignment 9:*

- Record and edit the 10-minute presentation video (Individual)
  - Each person should make a note and execute potential/desired edits after recording the presentation video to make the editing process a collaborative effort
- Upload the video to YouTube and submit the link (Individual)
- Organize all project materials in the GitHub repository (Individual)
  - This should be done ritually as the project progresses
- Write the Readme file and ensure clear labeling of files and folders (Individual & Group)
  - This should be done ritually as the project progresses

### **Week 9 (Nov 27-Dec 3):**

#### *Assignment 9:*

- Final review of the presentation materials and GitHub repository (Individual & Group)
  - Meet as a group for final discussion on completed product
- Make necessary revisions based on peer feedback (Individual)
  - Peer feedback should be collected continuously, but the finalized product should receive more thorough critique from various sources
- Submit the final presentation slide deck, video link, and GitHub repository link (Individual)

#### *Research Techniques:*

- Literature Review: Continue to reference relevant literature to support the project's context and design decisions.
- User Interviews: Gather last-minute insights from potential users to enhance the final presentation.
- Visual Storytelling: Utilize visual elements and narratives to convey the project's journey effectively.

#### *Design Goals and Outcomes:*

- Clarity: Ensure the final presentation clearly communicates the research, design process, and outcomes.
- Engagement: Engage the audience through compelling visuals and a well-structured narrative.
- Impact: Highlight the project's impact and relevance, emphasizing how it addresses the identified problem space.