**Team Recommender-Front-End-Winter24**

This quarter, I focused on developing a front-end component for a Team Recommender System. The system is designed to assist college/university instructors in forming teams using machine learning techniques for the analysis of student data, with the goal of suggesting project teams that are well-balanced and compatible. It generates two distinct team options, considering diversity and skill sets, to enhance collaborative learning experiences. Students and professors create profiles with comprehensive personal and academic information to facilitate precise team recommendations.

[**Flowchart**](https://lucid.app/lucidchart/9c3a5833-366d-42d8-8192-5719cecad88a/edit?viewport_loc=-1622%2C-681%2C2378%2C1942%2C0_0&invitationId=inv_00bbdf8f-3ec8-4ddd-84cb-9051ceb629db)

Developed an initial flowchart to illustrate the system's operational workflow, from user registration to team formation. This visual representation helped in identifying key functionalities, user interactions, and decision points within the system.

[**Personas**](https://docs.google.com/document/d/1JFh8SETOwu9c3gy3tYXtuNz2Ly5MI5obaRjb0OimJlA/edit?usp=sharing)

**Professor**: Drafted a detailed persona for the professor, including typical attributes, goals, and system expectations. This persona helps in understanding the professor's perspective, guiding the development of features that cater to academic oversight and team management.

**Student**: Developed a student persona, highlighting diverse backgrounds, academic standings, and personal interests. This persona helps make the system match students for the team based on variety and skill balance.

[**Requirements**](https://docs.google.com/document/d/17IecABX4HrwjYmNIsjkhvW1GiqwP9QjD/edit?usp=sharing&ouid=115284199209640719511&rtpof=true&sd=true)

Compiled a comprehensive list of system requirements based on the personas and initial flowchart. These requirements cover user registration, profile management, team formation criteria, and user feedback mechanisms, ensuring a robust foundation for system development.

[**Use case**](https://lucid.app/lucidchart/7facfc64-ed0f-4e7c-a87a-d204040d9850/edit?beaconFlowId=1F5A1920A9CEF38B&invitationId=inv_5e3c159a-8bfd-4466-9557-48ed23c18797&page=0_0)

The use case I developed showcases the system's interactions, encompassing features like login/signup, including team formation requests by professor, and the feedback loop for team adjustments. These scenarios demonstrate the system's functionality and user experience.

**Figma**

I began by building upon a design developed by a previous capstone project student from last quarter. Initially, this design lacked several critical components such as Homepage, and Team Formation pag, essential elements for the team formation system to integrate with machine learning outputs. I introduced pages that display the team options generated by the machine learning algorithm, complete with explanations of the team's formation process and its potential success rate.

To enhance functionality, I implemented a feature allowing instructors to approve, modify, or request a reformation of teams as suggested by the machine learning model. Additionally, I provided students with the capability to accept their assigned team formations as published by the professor based on machine learning recommendations or to request a team change. Students can now send a message to their professor explaining their reasons for wanting a change. This grants professors the authority to either honor the student's request for a different team or maintain the original team assignment.

Furthermore, I added a communication feature within the student view, enabling team members to send messages to one another, fostering better collaboration and interaction. The Figma design was updated to reflect these enhancements, focusing on creating a user interface that is both easy to navigate and intuitive, thereby improving the overall user experience.

[**Usability Study**](https://docs.google.com/document/d/1n_ftbS5YLOC4kT8Eg45vqaZH_Q0aNvPL/edit?usp=sharing&ouid=115284199209640719511&rtpof=true&sd=true)

Conducted a usability study to test the design with potential users, gathering insights on user experience, interface clarity, and functionality. This study provided valuable feedback for refining the system's design and interaction patterns.

[**Update Figma**](https://www.figma.com/file/56yCMTDXdFiQA2me8jeBep/Teamwork-Project---Winter24?type=design&node-id=204%3A4307&mode=design&t=npIWALcwkRv3iGQD-1)

Based on recommendations from the usability study aimed at enhancing user satisfaction and system accessibility, I implemented the final design updates. Feedback received from students during the study included suggestions like incorporating a dashboard page for easy navigation. Consequently, I ensured that all buttons and icons were made clickable to improve the user interface.

Throughout this quarter, my work on the Team Recommender System has spanned from conceptualization to design refinement. By focusing on user-centered design principles, we have laid a solid foundation for a system that promises to enhance team formation in academic settings. The iterative design process, informed by user feedback, has been crucial in developing a system that meets the needs of both students and professors.