

Status Report 2

EE / CprE / SE 492 - sdmay25-06

Iowa Adventure Cyclists Course Creator

Week 2 Report

August 2024 - May 2025

Client & Faculty Advisor: Julie Rursch

Team Members

Kayley Clark - Technical Lead

Tanner Smith - Algorithm Architect

Nayma Garcia - UI/UX lead

Grant Pierce - Client Relation Manager

Nick Thoms - Testing

Eli Newland - Task Manager

Wan Elisa Wan Sarif - Component Design

Summary

Over the past two weeks, the team has made progress on both frontend and backend development. On the frontend, we continued refining UI screens, ensuring consistency in design and improving usability across different devices. Several key pages were implemented, and preliminary testing was conducted to verify layout responsiveness and functionality. On the backend, we established a standardized nomenclature for variables, functions, and endpoints to enhance code maintainability. Additionally, the file structure was reorganized to provide better scalability as development progresses.

Past Week Accomplishments

Tanner and Eli focused on designing and implementing the foundational components of the graph data structure, which will be used for route planning. They also worked on integrating this structure with the backend API to facilitate data retrieval and storage. Meanwhile, Kayley and Nayma continued frontend development, implementing additional UI screens and refining existing ones based on team discussions and initial usability testing. Elisa contributed by iterating on the mockups and providing design adjustments to align with feedback from the team.

On the security and authentication side, Grant successfully implemented error handling for Okta authentication and ensured that signing in now functions correctly. However, due to persistent dependency conflicts between Expo and Google authentication libraries, Google sign-ins had to be removed from the authentication process. Despite this setback, Okta authentication is now fully operational. He also resolved lingering dependency issues that previously hindered backend progress. Nick focused on expanding the testing plan, developing unit tests for core backend functionalities, and ensuring coverage for the newly implemented features. While the team has made substantial progress, we have not yet met with our client but plan to do so in the coming weeks to present our developments and gather feedback.

Pending Issues

Some inconsistencies remain in the integration between the frontend and backend, particularly in API calls and data handling. The team is also troubleshooting certain performance issues related to the graph data structure, ensuring that route calculations are efficient. Further refinements to authentication and security measures are still in progress. Additionally, finalizing the overall project roadmap requires client input, which we anticipate addressing in our upcoming meeting.

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Kayley Clark	Continued frontend development, worked on refining UI screens, and collaborated with Nayma to ensure consistency in design.	6	68
Tanner Smith	Worked on designing and implementing the graph data structure for route planning, integrating it with the backend API.	7	73
Nayma Garcia	Developed additional frontend UI screens and iterated on existing designs based on team discussions.	6	66

Grant Pierce	Successfully implemented error handling for Okta authentication, ensuring sign-ins work correctly. Resolved dependency issues.	7	70
Nick Thoms	Expanded the testing plan and developed unit tests for backend functionality, ensuring new implementations are covered.	6	66
Eli Newland	Worked on integrating the graph data structure with the backend, ensuring seamless data retrieval and storage.	7	72
Wan Elisa Wan Sarif	Updated mockups and adjusted UI designs based on feedback from the team to align with development progress.	6	64

Plans for Coming Week

Moving forward, the team will focus on finalizing key frontend screens and ensuring smooth interaction between UI components and backend services. Backend development will continue with refining the route planning algorithm, optimizing data storage, and ensuring seamless API communication. Additionally, efforts will be made to address outstanding security concerns, particularly in authentication and access control. The team also plans to conduct another round of internal testing to identify potential bugs and ensure system stability. A meeting with our client is planned in the coming weeks, where we will present our progress, discuss project direction, and incorporate their feedback into our development plan.