

EE / CprE / CybE / SE / SD 491– sdddec24-17

SmartPark: IoT-Driven Automatic Parking Solution

Week 6 Report

March 05 – March 19

Client / Advisor: Md Maruf Ahamed

Team Members:

William Clemmons - Project Lead and Software Design.

Kennedy Reiling - Client Interaction and Hardware Design.

Brian Witherspoon - Hardware and Software Design.

Ethan Haberer - Hardware Design and Quality Control.

Zachary Sears - Hardware Design and Quality Control.

Mubassir Serneabat Sudipto - Client Interaction, Quality Control, and Software Design.

Past Week Accomplishments

- Application Team:
 - Initiated research into UI/UX best practices and trends to inform their design decisions and enhance user satisfaction.
 - Concentrated on understanding user needs and preferences to ensure the application is intuitive, engaging, and user-friendly.
- Server Team:
 - Conducted thorough research on server technologies to understand the best practices and latest advancements.
 - Began writing and testing code to lay the foundational elements of our project, focusing on efficiency and reliability.
 - Developed a clear plan for implementing the server, considering various aspects to ensure a smooth deployment.
 - Explored options and strategies for stable hosting to ensure the project will have a reliable and secure platform.
- Hardware Team:
 - Began experimenting with ultrasonic sensors, laying the groundwork for further development and integration.
 - Created initial skeleton code to establish a foundational structure for future enhancements and integration of multiple sensors.
 - Started the preparatory work to combine multiple sensors to ensure seamless communication and functionality.

Pending Issues

- Need to allocate more time for team meetings to increase overall productivity.

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
William Clemmons	Research UI/UX concepts that we can apply to our project.	1	18
Kennedey Reiling	Met with the client/advisor. We discussed user needs and requirements.	1	17
Brian Witherspoon	Met with the client/advisor. We discussed potential weatherproofing options and the drawbacks of each.	1	17
Ethan Haberer	Met with the client/advisor. Explained various in-class activities that have helped our progress.	1	18
Zachary Sears	Met with the client/advisor and discussed progress in the project. Went over our user needs and requirements presentation.	1	18
Mubassir Serneabat Sudiopto	During the meeting with the client and advisor, I reviewed the advancements in our research on server technologies and the preliminary stages of coding and experimentation. Additionally, I explored the server's deployment strategies and outlined a roadmap toward achieving reliable hosting for the project.	1	19

Plans for Coming Week

- Application Team
 - We will start planning to create a wireframe to outline the app's basic functionality, providing a clear blueprint for further development.
 - We will explore various UI libraries to identify the most suitable options for the app's development, aiming for an effective and efficient design process.
- Server Team
 - We intend to learn how to implement Firebase hosting to ensure reliable and scalable hosting solutions for the project.
 - We will also focus on optimizing the project's designated server, ensuring it effectively supports the application's needs.
- Hardware Team
 - We will continue their work with Arduino boards and sensors, advancing their understanding and capabilities in hardware development.
 - We will mainly focus on connecting multiple sensors simultaneously to enhance the system's functionality and responsiveness.