EE / CprE / CybE / SE / SD 491– sddec24-17
SmartPark: IoT-Driven Automatic Parking Solution

Week 8 Report

March 27 – April 2, 2024
Client / Advisor: Md Maruf Ahamed

Team Members:

William Clemmons - Project Lead and Software Design.
Kennedey 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:
    - Continued UI Design.
    - Sketched our App Design on a whiteboard.
    - Began Prototyping Design in Figma.
    - Engaged with the client for a deeper understanding of their needs.
    - Conducted thorough security assessments to fortify the server infrastructure against potential vulnerabilities.
    - Implemented and tested simple data sending and receiving functionalities by setting up a simple Firebase server to improve application development efficiency.

Pending Issues

There are no pending issues at the moment right now.

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
William Clemmons	Lead both the software team meeting and the team meeting with the client.	5	28
Kennedey Reiling	Met with the client/advisor and updated him on the milestones we completed. During the meeting, we discussed various options for the signage within the parking lot to guide the users to the spot.	3	26
Brian Witherspoon	Met with client/advisor and discussed potential options for navigation system.	3	26
Ethan Haberer	The app team met to discuss UI design and functionality. Discussed libraries for UI design as well.	5	27
Zachary Sears	Used an Arduino simulator to simulate an Arduino Uno connected to 4 Ultrasonic sensors and corresponding LEDs. Contributed to Bluetooth and WiFi board research.	3	27
Mubassir Serneabat Sudipto	Set up and enhanced the application's development involved configuring the Firebase server infrastructure and conducting preliminary experiments on data transmission processes to ensure efficient communication for the SmartPark App.	4	28

Plans for Coming Week

- Application Team:
    - We will start finishing up the UI Design.
    - We will begin the App Prototyping.
    - We will configure the Firebase server infrastructure for backend services.
    - We will conduct initial tests on data exchange mechanisms to enhance application communication.
- Hardware Team:
    - We will continue their work with Arduino boards and sensors, advancing their understanding and capabilities in hardware development.
    - We will start to implement the tested simulations into physical hardware.
    - We will start to test the concept of using the wifi board and Bluetooth module.