EE/CprE/SE 491 WEEKLY REPORT 8

03/26/24 - 04/2/24
Group number: 22
Project title: CyRide Visualization
Client: Mohammed Soliman
Advisor: Mohamed Selim

Team Members & Role:
Bradon Buckalew: Programmer
Endi Odobasic: Programmer
Evan Schlarmann: Programmer
Andrew McMahon: Programmer

Week Summary

Created mock data and basic backend endpoints for testing, implemented WebSockets in React and Django to use the mock data and test, and continued to develop the UI of the project.

Accomplishments

Created and ran SQL scripts to populate the database with mock data to use for testing. Added basic endpoints to the backend project to test the connectivity between the backend and the database. Continued to develop database design diagram by eliminating the route table and adding it in to the names of the bus. Since many vehicle types will be used, we found it is easiest to keep the bus name, route, and number all in the same place.

Created WebSockets in Django and React to allow Django to receive the mock data from the database, and React to receive the Django data & display it accordingly. Continued to craft our specific use of the Google Maps UI by adding an endpoint to display the Google Maps UI. This update in conjunction with the WebSockets will allow for constant updates of the data, and once the UI is finalized, the mock data can be shown and Milestone 1 will be complete.

Pending Issues

None

Individual Contributions

NAME	Individual Contributions	Description	Week Hours	Cum. Hours
Evan Schlarmann	1) Created A Vehicle WebSocket In Django 2) Changed Django dependencies	1) Developed a WebSocket in Django that accepts connections and repeatedly sends a response back. 2) Changed Django settings to use new dependencies. Django now runs using a Daphne server that automatically handles HTTP and WebSocket protocols. Also changed Django to run on ASGI so it can handle asynchronous operations.	7	43
Braden Buckalew	1) Move React js project to React ts project 2) Vehicle Web Socket 3) Coding Standards Document	1) Moved React js project to a React ts project so we can use types and have safe code. 2) Created a basic Vehicle WebSocket to transfer life vehicle data to the browser 3) Created a Coding standards document, for each layer in the system create standards from other popular projects/standard documents	10	35
Endi Odobasic	1) Google Maps UI Page	1) Creating a new branch and working on adding a new endpoint to display the google maps interface. After displaying the google maps interface, fetched the mock data from the postman server to display mock data on the map in the form of markers (will act as buses) with insights under them.	6	38
Andrew McMahon	1) Created mock data for testing 2) Set up basic backend endpoints	1) Developed and executed SQL scripts to perform basic operations on the database. Used to populate the database with mock data for testing the frontend UI and backend endpoints. 2) Using Django and Python created basic endpoints (backend) to be used for testing the mock data (eventually for round-trip testing).	10	35

Plans For the Upcoming Week

- Continue improvements on the Google Map UI
    - Continuing to finish the Google Map UI from a top down view and display some temporary example points to display on the map.
- Begin to develop communication between the frontend and backend
    - Have basic functionalities that show the frontend and backend are properly communicating by next week, near full communication by 2 weeks, per the agile development plan.
- Retrieve mock data within Django
    - Create models and serializers to retrieve data from Django to be modified/sent in Rest APIs and the WebSocket.

Weekly Client/Advisor Meeting Summary

We began the meeting by discussing individual accomplishments in the last week, and showing everyone contributed to the project. Specifically, we gave updates on the CI/CD pipeline, WebSocket connections, database, and UI design, which were all marked on last week's document as "to-do" for next week. Our physical development of the project is ramping up, as we've now laid the frame for the tech stack and optimized development via CI/CD and creating GitLab issues. We continue working towards Milestone 1, which displays buses based on mock data in the database, which we anticipate will be completed within 2 weeks.

We wrapped the meeting up by discussing individual plans for the upcoming week, which include developing the WebSocket connection in React and Django, mock data and endpoints in the backend, and the finishing touches on the Google UI.