EE/CprE/SE 492 STATUS REPORT 2

09/6/24 - 09/19/24
Group number: 22
Project title: CyRide Visualization
Client: Mohammed Soliman
Advisor: Mohamed Selim

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

Week Summary

The team created a new plan based on new criteria received from the client. The plan has been broken down into different parts that can be implemented by team members. This focuses on different aspects of the project that need to be completed.

We have started working with CyRide data history to get a better view of the location data and how it can be used in machine learning. For the maps system, we are trying to find a free and more collaborative solution that can be implemented to reduce costs. Lastly we are preparing the connection system that will communicate with bus UEs to gather location data to display for users.

Accomplishments

Created a new project breakdown that includes new information provided by the client. We also developed the database to store the CyRide data to be used in a machine-learning algorithm.

Pending Issues

The bus UE is non-functional and has no connections for live bus data.

Individual Contributions

NAME	Individual Contributions	Description	Week Hours	Cum. Hours
Evan Schlarmann	1. Updated the database 2. Created CSV parser for CyRide data. 3. Created new project breakdown 4. Started the UE data collection module	1. Updated the database to mirror the CyRide data so that it can be imported and manipulated in the SQL server. This update also included updating the Django models to reflect the changes. 2. Created a CSV parser for the CyRide data if we need it in different formats for application usage. 3. Created new task breakdowns based on new requirements from the client and information that has been provided. 4. Started building a module that will be used to connect to the UE to gather live bus data.	11	76
Braden Buckalew	1. Setup a new Google Account 2. Review data model	1. Setup a new free trial through a different Google account and replace the API key in our repo so our prototype is back up and running 2. Review and experiment with making graphs out of the cyanide csv we have obtained. So we can better understand cleaning our data going forward	7	69
Endi Odobasic	1. Arima Model 2. Project Tasks and Deadlines 3. Interactive Maps	1. Looked into the Arima model and saw the implementation so that I could get familiar with it once we start getting to the point when we need to implement it in the future. 2. Looked at our project's tasks breakdown to get a feel for what sort of tasks we are doing for the semester and what should be done by the	7	72

		end of the semester regarding their deadlines. 3. Looked into other interactive maps that can be used as we want to steer away from google maps. The free trial could come back to bite us so we need to find another service that will give us similar services that work for our project but free.		
Andrew McMahon	1. Add historical data to DB, ensure backend supports 2. Start simulating historical data	1. Began to add historical data to backend & check that backend endpoints work as intended with the data. 2. Worked on making the historical data appear on the frontend, per this week's (9/17) tasks given.	6	68

Plans For the Upcoming Weeks

- Endi will be looking for a new map service for displaying our bus locations.
- Braden will be analyzing and cleaning the CyRide data
- Andrew will integrate the data into the application
- Evan will start building a pinging module to get live data

Weekly Client/Advisor Meeting Summary

This week, we met with our Client and Advisor, bringing them a task breakdown document and some individual task breakdowns for each team member, per their request. The breakdown gave our ideas on specific details of the project to be implemented and in what order. We also provided a Gantt chart to help the Client and Advisor visualize our plan for the semester. Upon examination of the document, the Client and Advisor proposed 4 tasks (1 per team member) to be completed in the next 1-2 weeks. Splitting the tasks up, we decided Braden will clean the historical data for implementation in the model, Endi will look for a new map service that is open-sourced, Andrew will simulate historical data on the frontend, and Evan will build a pinging module that gets a response back. We then discussed the next steps for connecting our project to live data via the ARA team's LibreNMS system, which we plan to implement once we have access to the system.