

Team 36

Project Title: AI-VVO (Artificial Intelligence Volt-VAR Optimization)

Date: 10/31/2021

Members:

Jaden Alamsya

Demetrius Christou

Evan Dinnon

William Dulaney

Rachel Owens

Megan Phinney

Derrick Vang

What we've accomplished in the past week/what we've been researching

Jaden Alamsya – I looked into OpenStreetMaps and how we could use it to implement a custom map in our project. I also watched a React-Leaflet tutorial.

Demetrius Christou - I have managed to get the application working completely on the VM. I also spent time learning about how the current application works with the postgresSQL database.

Evan Dinnon - Finished watching the tutorial video from last week provided by Will. Began investigating the backend API that handles data communication between the Machine learning algorithm and the backend. Worked with Will to create a design diagram for how the machine learning algorithm will work with the rest of our design.

William Dulaney - I investigated the machine learning backend API that deals with transferring the bus data from the backend to the machine learning application. Evan and I created a preliminary diagram of how the machine learning algorithm will work.

Rachel Owens - I researched how to implement OpenStreetMaps in React and the best way to implement it in our current project. I discovered that React has a react-leaflet

library which utilizes OSM and will plug in easily to our project. I also began researching how to containerize the Map module and how to share data between containers.

Megan Phinney - I came up with a game plan on how to connect all the Docker files so they are able to interact. I learned that a user-defined bridge network would be a simple option to provide the needed flexibility.

Derrick Vang - I finished a tutorial on data visualization and started to research how to implement OSM. I also started watching some React-leaflet tutorials.

What we're planning to do in the coming week

Jaden Alamsya – I plan to dig deeper into OSM and go through more React-Leaflet tutorials.

Demetrius Christou - Learn more about the current connection of the application and the database and look into possible ways to improve it or add onto it. I also plan on trying to understand the purpose of the ML api and how it functions in the app.

Evan Dinnon - This next week, I will work with Will as well as the backend team to investigate possible solutions to communicating information to the backend. Will need to develop an understanding of where the data will be stored and how it will transfer between the various systems. We will also apply Demetrius's solution to get the application running on the VM.

William Dulaney - In the coming week, Evan and I will talk with Demetrius and Megan to get a better understanding of how the data transfer between components of the application works. We will also get the application to run in the virtual machine using Demetrius's fix that he found regarding port setting information.

Rachel Owens - I plan to continue researching react-leaflet. I would like to set up a preliminary map and test out customizing icons and zooming in on the right location. I also plan to research how to containerize the Map component.

Megan Phinney - Next week, I plan on playing around and testing user-defined bridge network to connect docker containers. I would like to be able to connect smaller and simpler docker containers before we integrate this into development.

Derrick Vang - I plan to research more on how to implement OSM with React-leaflet and do more React-leaflet tutorials.

Issues we had in the previous week

Jaden Alamsya – I had trouble getting the project completely working on the VM. I will be following Demetrius's advice to try and get it working.

Demetrius Christou - I had some trouble understanding the code from the previous team. The lack of comments in the code made it very difficult to understand what was going on in many parts of it.

Evan Dinnon - I had trouble figuring out how the previous team handled data communication between the Machine learning algorithm and backend. The folders that would have contained the code for this appear to be empty. What little code we could find was not commented and overall confusing.

William Dulaney - I had issues running the application on the VM. This may have been due to port settings in the environment file being incorrect, so I will use Demetrius's fix and I will get the application to run on the VM.

Rachel Owens - I have had issues running the application on the VM. Demetrius found a fix and was able to get it running and will follow his advice to get the application running.

Megan Phinney - I had issues with understanding what needs to be connected for all parts of the project. With working with the Docker containers that connects all the components I felt a bit lost sense I'm not actively working in most sections.

Derrick Vang - I had trouble getting the application to completely run in my VM, I plan to follow the advice Demetrius gave to get it to work properly.