# AI-VVO sdmay22-36 Weekly Update #5

10/25/2021 - 10/31/2021

#### Front-end(This Week)

- Researched how to implement OpenStreetMaps in React
  - Will use React library "react-leaflet"
  - This way we can create a simple map container
- Leaflet allows for custom icons and map customization
  - Leaflet is also free and open source
  - Integrates OSM pretty seamlessly
- Researched how to containerize map component
  - Will create a separate container for the map component
  - Use of shared network recommended
- Started React-Leaflet tutorials

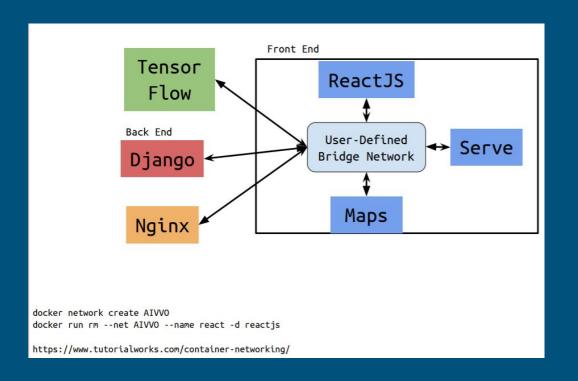
#### Front-end (Next Week)

- Continue researching different aspects of OSM
- Complete more leaflet tutorials
- Continue researching how to implement certain features such as highlighting map routes and adding custom styling

#### Back-end (This Week)

- Able to get the previous teams application working completely
- Researched into how the current implementation of postgres is working
  - Able to look at the current data tables like username and password
- Looked into how to add other tables though Django
- Looked into the current Docker implementation

### Back-end (This Week) ~ Docker



#### Back-end (Next Week)

- Look into changes that will be needed for the database to work properly with the ML changes.
- Determine what new tables might be needed for the project
- Determine if Neo4j would be a good fit for any of the new tables that might be added.
- Test out using user-defined bridge network to connect all Docker containers.

### Machine Learning (This Week)

- Created diagram of how machine learning model will work
- Investigated how the backend ML API works
- Backend ML API's primary function is to pull data from the backend database into the ML application and the front-end display

### Machine Learning Model

**Updates** GridController **AIVVONet** Feeder (Agent class) (Neural network Values to class derived New Feeder from torch.nn) Values Output Layer: Input vector: Convolutional (One hot (Values from Layers, Max encoded vector CSV files for Pooling Layers, with a one and a Fully each feeder as a Connected Layer at signifying an N x 1 vector) the end action taken and 0's signifying action not taken)

## Machine Learning (Next Week)

- Get the application to run on the virtual machine
- Demetrius found a fix regarding port settings that may resolve our issues
- Will work with the backend team to investigate the transfer of information between the Machine Learning algorithm to the backend and front end