

EE/CprE/SE 491 WEEKLY REPORT 3

September 26th, 2024 - October 3rd, 2024

Group number: sdmay25-43

Project title: GridAI

Client &/Advisor: Dr.Gelli

Team Members/Role:

- **Skyler Kutsch** _____ **Record Keeper**
- **Franck Biyoghe Bi Ndoutoume** _____ **Test Lead**
- **Hang Kim Thang** _____ **Cyber Security Lead**
- **Jesus Soto** _____ **Team Organizer**
- **Justin Soberano** _____ **Component Design Lead**
- **Rangsimun Bargmann** _____ **Role Manager**

Weekly Summary

During our team meeting we discussed how to more effectively and efficiently present our slides to the professor and grad students each week. We decided to have one presentation with all our slides. This allows us to save time by not swapping computers after each presentation, making the presentations much more efficient. During the advisor meeting we watched a presentation by Rolf about the backend and we asked questions about how to progress our action items. We also got feedback on how to better our presentations, we need to organize them as recap, work status, and action items for next week.

Past week's accomplishments

- **Skyler Kutsch** – Researched DeckGL layers for grouping nodes by street and for speeding up rendering >8000 nodes
- **Franck Biyoghe Bi Ndoutoume** - Looked into libraries and tools to enhance Code Editor. Currently working on a Code Editor react app to test those libraries.
- **Hang Kim Thang** – Looked for a real time update in the backend and save it into the database. Make a better view for the user which allows the user to be able to view in 3D instead of 2D.
- **Jesus Soto** – Created simple dashboard and widget prototypes using react libraries to understand the process of how these will use provided data to dynamically display it to users.
- **Justin Soberano** – Started organizing figma prototypes for graph visualization for the

dashboard

- **Rangsimun Bargmann** - studied the Thingsboard code base to get an understanding of how the widgets are structured and gained an understanding of how Thingsboard manages dynamic display of data in real-time

Plans for next week

- **Skyler Kutsch** - Do further research about DeckGL layers and the current status of the project to see how it can be further improved
- **Franck Biyoghe Bi Ndoutoume** - Planning on looking more into how to implement a chat box for our code editor.
- **Hang Kim Thang** - Will be looking into the source code and trying to look deeper into to make sure if it is fit into our project.
- **Jesus Soto** – Keep learning and improving the prototypes for better visualization and integration with the GridAI implementation.
- **Justin Soberano** – Start looking through new Mantine’s UI and see if I could find new frameworks/libraries to accompany Mantine.
- **Rangsimun Bargmann** - begin creating a prototype that handles large amounts of data and displays it dynamically to develop a base of how the GridAI frontend should handle the data and possibly begin development on GridAI’s widget structure.

Pending issues

- Waiting for access to the backend APIs
- Waiting for access to the frontend codebase
- Waiting for Docker Compose set up

<u>NAME</u>	<u>Individual Contributions</u> <i>(Quick list of contributions. This should be short.)</i>	<u>Hours this week</u>	<u>HOURS cumulative</u>
Skyler	Researched DeckGL layers, looked back on previous notes to better understand the current status of the project	3	15
Justin	Researched UI/UX Graph Components Organizing Figma Dashboard/Pages	3	15
Rangsimun	gained understanding on Thingsboard code	3	11

	base, specifically it's widget structure and how it manages to handle displaying large amounts of data in real-time.		
Franck	Looked and researched libraries and tools to enhance Code Editor. Started working on a Code Editor app to test those libraries.	4	13
Jesus	Created prototypes of simple dashboards and widgets to better understand data handling.	3	15
Hang	Updated the map with 3D views, which users are able to navigate easily and see all the nodes closer and what is around.	4	8

Summary of weekly advisor meeting

Meeting Notes 3

10/1 - Team meet

- Discuss making google slides to present all slides
- discuss using the vm for GitLab
- Agreed to work on shared slides to avoid switching the computer out during advisor meeting presentations

10/2 - Advisor meeting

- group presented
- code editor is mostly implemented, but chatbox is not

For presentation:

- recap
- work status
- action items

BACKEND PRESENTATION:

- visualization comes first, then analyze visuals

- graph data and time series data
- DMS and DERMS project
- modular and decoupling is very important
- backend is python services
- uses http for data transfer
- frontend will get node data
- uses Gitlab CI/CD
- developed for Google Kubernetes Engine
- They are slacking on testing
- pushes must pass CI/CD to get onto the main branch
- strict about merge requests
- plan >issue board
- settings >ci/cd >variables, also contains firebase credentials
- run docker compose in vm
- localhost/swagger/code.api for info about parameters and file paths
- ^^ configured in JSON for post and get requests
- look up docker compose and Kubernetes

Next time:

- Docker compose documentation
- Backend will be ready thru VM
- Will get an email once its ready