

EE/CprE/SE 491 WEEKLY REPORT 1

Beginning of Semester – September 19th, 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

Our objective for the past three weeks has been to get familiar with the project specifications, the advisors and their expectations, and our new team. We met as a team, contacted the lead advisor/client, Dr. Gelli, and agreed on weekly meeting times within the first week. By the second week, we had communication and organization methods worked out. Two team members switched class sections, and we started getting into the groove of teamwork. This past week, we gained access to the GitLab repository and the team website. We all added our names and team roles to the website. We briefly discussed the backend specifications during our Wednesday meeting with Rolf, the backend advisor.

Past week's accomplishments

- **Skyler Kutsch**
Took meeting notes and researched socket.io – refreshed how to connect React websites to Websockets
- **Franck Biyoghe Bi Ndoutoume**
Spend more time trying to understand the project. Did more research on the ThingsBoard docs.
- **Hang Kim Thang**: Spend more time doing more research, wanting to make this project the best compared to the previous one.
- **Jesus Soto**: Got the team role of Team Organizer and ensured everyone on the team was clear about their responsibilities moving forward. Conducted initial research on ThingsBoard to understand its documentation and widgets.
- **Justin Soberano**: Researched component design to prepare for the role of Component Design Lead
- **Rangsimun Bargmann**: Looked into Thingsboard to start getting an idea of what the GridAI dashboard might look like.

Pending issues

- Each team member needs to be assigned an action item.
- Everyone needs to do their best on their assignments.
- Each team member has to demonstrate what they have learned and what they have been working on for the next meeting with the client and advisors.

Individual contributions

<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	Meeting notes, summaries on Report1	4	8
Justin	Added advisors to Git repo	4	8
Rangsimun	Gained access to team website, added Team Contract to website	4	8
Franck	Implemented my information on the website. Got access to the gitlab.	3	6
Jesus	Assigned as the Team Organizer, got access to the GitLab repository. And added my credentials to the team website.	4	8
Hang	Assigned in security and anything if one needs help.	4	9

Plans for the upcoming week

- ***Skyler Kutsch***
I will be looking at the Thingsboard to better understand the project and reviewing how I connected a previous React project to WebSockets to see if that would be an action item I could do easily.
- ***Franck Biyoghe Bi Ndoutoume***
I will be looking into the code editor enhancements. The objective is to improve the code editor's aesthetics and functionality by adding comments and a chat box for peer to peer conversations.
- ***Hang Kim Thang***
I will be doing grid map visualization, layout the structure of an electrical grid and focus on security and risk management. Most security assignments and its architecture to make sure it is secured.
- ***Jesus Soto***
Set up the weekly team check-in to ensure all members progress on their tasks and are

aligned with the project goals. Continue exploring Thingsboard documentation to gain a deeper understanding of all available widgets. Collaborate with Ronnie to start designing and prototyping components for the front-end using Angular and React.

- ***Justin Soberano***

I will be looking into the Figma dashboard and create wireframes/prototypes on how we can improve upon the current designs in GridAI.

- ***Rangsimun Bargmann***

I will attempt to get a Thingsboard demo running and learn the documentation of all the components of the dashboard to get a better understanding of how we would implement a dashboard of our own for GridAI. Thingsboard will provide a good source of inspiration in creating our own dashboard and give a good insight as to how the code should be structured.

Summary of weekly advisor meeting

Week 1 Notes:

All thru GitLab

-local coding done with Docker Compose

-coding done in VMs which will be provided

-NextJS Framework

-Firebase for authentication, need to make login pages

-Frontend needs to process 10k nodes as fast as 50k nodes on a map display

-DeckGL used to render map, need to render map faster

-Right panel used for data

-user file sharing with websockets

-Thingsboard: inspo for the project

-Bable library to build widgets on the client side (?)

-ask for git repo in 491, add client as manager on git

Week 2 Notes:

Action Items:

1- figma dashboard

2 and 3 - focus on grid map visualization

3- single line diagram using svz or different vector graphics

4- code editor aesthetics, add comment and chatboard features and stuff in google docs

5 - thingsboard documentation, understand all widgets and be familiar with source code on frontend - inspire and prepare component design (a bit more complex action item, can have 2 people)

Next week:

Have notes and questions about action items

virtual machines and power saver test pit next week

backend run down next week

Which action item will be picked by whom