

EE/CprE/SE 491 WEEKLY REPORT 5

September 19th, 2024 - September 25th, 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

We gained access to the repository after our team meeting on Tuesday. Our advisor meeting was online and we went over the frontend and backend code with Rolf and Peeyush. We were invited to discuss the code and the next steps for our action items with them. Next week should be more eventful since we gained access to the code a few days ago.

Past week's accomplishments

- **Skyler Kutsch** - Started coding the Single Line Diagram React app. The app can read nodes and links from JSON file and display shapes with hover over info. Researched react libraries for graphing and graphing algorithms to place the nodes.
- **Franck Biyoghe Bi Ndoutoume** - Researched and how to implement socket.io for real time communication for our feature Chat Box.
- **Hang Kim Thang** - designed a better grid view, started implementing code for basic start.
- **Jesus Soto** – Improved the widgets and dashboard prototype application. Incorporated InfluxDB for time-series data interaction for the widgets to dynamically display data according to what is being received from the database.
- **Justin Soberano** – Created a mock design of the map that could be used for the front end map viewer in GridAI.
- **Rangsimun Bargmann** - added more styles of widgets to my prototype and started working on customizability of widgets that will be implemented in the actual project; successfully cloned the source code repository and got it running on the virtual machine.

Plans for next week

- **Skyler Kutsch** - Use a force-directed graphing algorithm to find positions of the nodes.
- **Franck Biyoghe Bi Ndoutoume** - Plan this upcoming week is to go through the code and to understand it very well and have it run on the VM. Hopefully I can start to implement React Mosaic.
- **Hang Kim Thang** - Will make the project code run on VS code with no issues and look into the codes for having deeper understanding on what's happening and then plan to do design better.
- **Jesus Soto** – Review the provided code base and get it running in order to learn how the currently implemented parts of widgets and dashboard work to start implementing working prototypes.
- **Justin Soberano** – Do market research on the different applications that are currently out there that support ISO/DSO/DERAs and how we can improve upon the current front end experience.
- **Rangsimun Bargmann** - begin analyzing and understanding the source code and start to implement my action items, which are focusing on thingsboard widgets and dashboard functionality, into the source code.

Pending issues

- Update team website

** Hours are up to date from last week just add this week's hours

<u>NAME</u>	<u>Individual Contributions</u> (Quick list of contributions. This should be short.)	<u>Hours this week</u>	<u>HOURS cumulative</u>
Skyler	- Started single line app, researched and tested strategies for node placement	6	26
Justin	- Met with Gelli - Made front end proof of concept - Started market research	6	26
Rangsimun	- Added more widget styles to my dashboard prototype - Added the ability to customize widgets	6	25
Franck	- Researched and deeply learned	6	24

	about socket.io - How to implement socket.io for our feature Chat Box.		
Jesus	- Researched and learned about InfluxDB - Integrated InfluxDB into widgets and dashboard prototypes	6	26
Hang	- Have the project ready on git to VS code.	12	16

Summary of weekly advisor meeting

- Overview of how to set up the server
- Got access to the gitlab and code base
 - The project is divided into different parts: grid section, file management (PD2), and DOMS platform.
 - Authentication logic is found in the auth provider and different fetchers are available for retrieving data or files.
 - Firebase Admin setup is in place, but not crucial at the moment.
 - The entry point for each project is the page.tsx file.
 - Firebase service account credentials need to be added to specific paths as mentioned in the README.
 - A script is available to set up Docker and add users to the Docker group, but requires root access (sudo) to run.
 - Docker Compose is used to build and run services, with syncing changes to the Docker container without needing to rebuild.
 - For front-end changes, a dynamic compilation is in place to speed up development without redeploying the Docker container.
 - The README has sufficient information to get started, and it's important to pull the latest version from the main branch.
 - Next week's action items include reviewing progress via VMs, sharing screens, and demonstrating completed tasks.
- Went over the front end code and how different components call the API
- Went over how to set up the project and get it to work on the VM