
EE/CprE/SE 491 WEEKLY REPORT 1

Due: 2/25/2025

Group number: sddec25-17

Project title: Grid-UI: Developing Advanced Web-Interactive Interfaces for GridAI Power Grid Management Software

Client &/Advisor: Gelli Ravikumar

Team Members/Role:

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|---------------------------|-------|---|
| ● Nick McCullough | _____ | Team Manager/Organizer/Developer |
| ● Ponciano Ramirez | _____ | API Developer/Developer |
| ● Ethan Messmer | _____ | Component Designer/Developer |
| ● Yusef Harb | _____ | Record Keeper/Developer |
| ● Evan Sivets | _____ | Test Lead/Developer |
| ● Tristan Nono | _____ | React Specialist/Developer |
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Weekly Summary

This week, we all spent time as a group researching more about our project by reading the documentation from the group last semester and viewing the presentation that was provided by Rolf the previous week. As a group, we did more research on the tech stack shown to us in last week's presentation. We are still waiting for more resources to learn more about our project and hope to gain access to the codebase to understand better how our project is working under the hood.

Pending issues

- No access to the codebase yet, pending a presentation from us to ensure understanding of components.

Accomplishments/Contributions

Past week accomplishments

- **Nick McCullough:** Reviewed tech stack, organized our discord server for our personal group, added Google Doc report template to ensure weekly reports are streamlined
- **Ponciano Ramirez:** Did more React practice, researched more about the tech stack described in the slides
- **Ethan Messmer:** Learned more about the tech stack required, practiced Figma, and attempted communication with Dr. Gelli, resulting in one of the resources being sent.
- **Yusef Harb:** Worked on personal react project for practice, researched OpenWebUI framework, and reviewed previous teams' documents.
- **Evan Sivets:** Went through material given and applied that to other real world experiences to see where we could grow our project.
- **Tristan Nono:** Reviewed the project from the given presentation slides and kept everyone up to date about the project and team.

Individual contributions

<u>NAME</u>	<u>Contributions</u>	<u>Weekly hrs</u>	<u>HOURS cumulative</u>
Nick McCullough	Gained access to senior design website, reviewed tech stack technologies such as OpenWebUI, reviewed tech stack	3	10
Ponciano Ramirez	Reviewed slides provided by Rolf's last presentation and did more research on the documentation from the group last semester	3	10
Ethan Messmer	Practiced Figma and learned about comparable products such as EcoStruxure, Spectrum Power, and ThingsBoard.	3	10
Yusef Harb	Looked through previous teams' weekly and final reports and looked through examples of OpenWebUI projects	3	10
Evan Sivets	Researched more into GridAI real-life examples and where we could apply that to our project.	3	10
Tristan Nono	Spent time researching the project and reviewing the given resources to better understand what we would be tackling.	3	10

Plans for the upcoming week

- Look into adding stuff to our sdddec25-17 specific website
- Review resources given to us from this week's presentation
- Learn more about the tech stack that our project will be using
- Look into the codebase and better understand how our project works, specifically in the front end.

Summary of weekly advisor meeting

Week 1 Notes

- Student and advisor introductions
- Went over the technologies and progress of GridAI thus far
- Grid AI backend is complete and runs on Go and Python
- Utilizes Deck.gl for managing a large number of nodes and lines
- Three layers are used in Deck.gl (IconsLayer, LineLayer, and HeatMapLayer)
- The professor emphasizes understanding the market through the next few weeks

Week 2 Notes

- The previous team members gave a presentation
- Gitlab files will be provided to the team in a few weeks
- Showed structure diagrams of how the backend and frontend are built and should be configured
- The professor gave lots of tips for this project:
 - Have branches for just one or two features
 - Use an issue board so everyone is on the same page
 - Keep secrets, like credentials, in repos secret storage
 - Make lots of commits, describe them well, and merge them into master when done

Week 3 Notes

- Last semester GridAI team presented to us
- Showed structure diagrams of how the backend and frontend are built and should be configured
- 5 main components: SVG diagrams, market dashboard, collaborative code editing, map box, and widgets
- Widgets and main dashboard inspired by Thingsboard
- For naming branches, follow convention ...<yourName>/<feature>
- Have a staging branch when finishing changes and wanting to merge into master branch
- By next week, create a presentation to present our understanding, scope, and questions about the project
- Treat the previous team (currently in 492) as our mentors

