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**EE/CprE/SE 491 WEEKLY REPORT 2**

**Due: 3/4/2025**

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

For this week, our advisor encouraged us to contact the previous senior design team members for more info on each component they worked on. Each person on our team should seek out one of the components to work on as well as prepare a presentation of our understanding of the project and the component each one of us want to work on. We contacted previous team members for more information and have worked on our presentation for the professor.

**Pending issues**

- Still awaiting access to the codebase, pending a presentation of our understanding

## Accomplishments/Contributions

### Past week accomplishments

- **Nick McCullough:** Reviewed SE492 presentation and contacted Hang Thang for Map Box module info for the project, still pending a meeting time. Worked on a presentation.
- **Ponciano Ramirez:** Meet with Jesus and researched more about the dashboard and widgets component, which interested me most.
- **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:** Researched React Mosaic, looked through previous teams' documentation to learn more about Code Editor, and worked on presentation.
- **Evan Sivets:** Went through material given and applied that to other real world experiences to see where we could grow our project.
- **Tristan Nono:** Understood more about the tech and widgets component and more about the entire project.

### Individual contributions

<u>NAME</u>	<u>Contributions</u>	<u>Weekly hrs</u>	<u>HOURS cumulative</u>
Nick McCullough	Contacted Hang Thang regarding the Map Box module of the project. He responded asking to meet sometime on 2/27, and I responded on 2/27 with a proposed time, and no response as of 2/28	3	13
Ponciano Ramirez	Spoke with Jesus about the dashboard and widgets and got more insight into what to expect	3	13
Ethan Messmer	I emailed Justin from the previous team about the market dashboard. I learned more about Thingsboard and the different kinds of users(DESA, DSO, ISO) to determine what the dashboard needs to include for each user type.	4	14
Yusef Harb	Researched React Mosaic, contacted previous Code Editor component contributor, researched more about Code Editor	3	13
Evan Sivets	Researched more into GridAI real-life examples and where we could apply that to our project.	3	10
Tristan Nono	I met with another developer from 492 who was working on the code to understand more	3	11

	about a component and other parts of the project.		
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### **Plans for the upcoming week**

- Hopefully, we will start to get access to the codebase
- Look into adding stuff to our sddec25-17 specific website
- Review resources given to us from this week's presentation
- Research deeper into technologies components are built on
- Prepare a presentation with a deeper understanding of components and prepare questions
- Contact 492 GridAI team for questions and information
- 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

#### **Week 4 Notes**

- We presented our understanding of GridAI
- Presented the components each of us want to work on
- We will get access to codebase and an individual VM in the upcoming 2 weeks
- Figma education license will be provided next week
- He will share documents with more info next week
- Next week, present the responsibilities and requirements of the project
- Also, present a deeper understanding of the components
- Pose and prepare any questions