

## **EE/CprE/SE 491 WEEKLY REPORT 6**

**Mar 6 – Mar 12**

**Group number: 20**

**Project title: GridGPT**

**Client &/Advisor: Gelli Ravikumar**

**Team Members/Role:**

- **Tin Ngo -> AI Integration Specialist**
- **Jackson Phillips -> AI Integration Specialist**
- **Emma Heithoff -> Power Systems Specialist**
- **Eddy Andrade -> Frontend Lead**
- **Nick Doty -> Backend Lead**

### ○ **Past week accomplishments**

- Tin Ngo: I got halfway through setting up my machine for the project and noticed an error. I also practiced creating a branch and merging the branch with the main branch by adding a helpful command to the README.md. I looked into text generation, preprocessing, and training a fine-tuned model. I also found some AI models that I might start experimenting with when I get access to the VMs. I learned more about the process of how an input gets processed into the output.
- Jackson Phillips: We were able to find a lot more useful resources on hugging face that I had not been able to find before. There are lots of google colab notebooks with tons of tutorials for functions of the transformers library. I spent all of my time this week continuing to familiarize myself with these tutorials.
- Emma Heithoff: I am utilizing HuggingFace now with what I learned about OpenDSS heavily during this semester in order to collaborate with Jackson on making our proof of concept. Though this week we could not meet because of break, I did research individually for our next meeting on how our knowledge of each will mesh and we will use Colab the next few weeks. I focused on my blind spots in the collaboration of a model with the OpenDSS model for our project.
- Eddy Andrade: One of the Frontend leads for the project told me that Next.js has a introductory course on familiarizing with the framework and I spent most of the time going through the course. It was an easy follow all throughout, with some quizzes to test my knowledge of the framework. I did encounter some issues with connecting the project to Github with the code I was using to follow along the course, but I decided not to use it. I did learn about vercel.com. It was a website that helped me create data entries into the project, so this could possibly be used for this project. I also created some sketches on the implementation of our project from the Frontend perspective. These sketches are a rough draft.

- Nick Doty: This week I have continued to focus on InfluxDB. Updating and debugging it since when I booted influxDB up it started having issues, and focusing on understanding it in a local environment. Unfortunately, I did not focus much on Neo4jDB as I wanted to get a good understanding on InfluxDB first. However, I did look over the data folder in our shared git repository, which includes code for the influx\_client, influxDB, neo4j\_client, and neo4jDB. This has allowed me to see what work has been done so that I do not accidentally start working on something that is already completed.

○ **Pending issues**

- Tin Ngo: N/A
- Jackson Phillips: Still missing a VM from our advisor
- Emma Heithoff: I need time to work on my dataset before any issues arise, so no issues at this time.
- Eddy Andrade: I have no pending or important issues.
- Nick Doty: Not necessarily an issue but I am going to talk to the graduate frontend lead to see if he has any recommendations on what to focus on next.

○ **Individual contributions**

<b><u>NAME</u></b>	<b><u>Individual Contributions</u></b> <i>(Quick list of contributions. This should be short.)</i>	<b><u>Hours this week</u></b>	<b><u>HOURS cumulative</u></b>
Tin Ngo	AI processing flow research	6	39
Jackson Phillips	Transformers library in colab	6	38
Emma Heithoff	Integrating research into dataset for training	6	34
Eddy Andrade	Next.js intro course & Frontend sketches	6	36
Nick Doty	influxDB tweaking and minor neo4jDB research	6	36

○ **Plans for the upcoming week**

- Tin Ngo: Start creating the class/module for our AI application. Do more research on requirements and strategies for generating text/code from the AI model. Work with group members to understand

further requirements and expected outcomes.

- Jackson Phillips: If we get VM access, I will get a model running and practice training on there. If we do not get VM access, I will do more colab tutorials.
- Emma Heithoff: Meet with Jackson to practice training and continue refining dataset from Git resources provided by client. Similar to Tin, work with group members to understand further requirements and expected outcomes. There will be time to work on the dataset heavily this next week. I will look at previous dataset compilation to train other AI models if I can pinpoint that in HuggingFace or another source.
- Eddy Andrade: I didn't have time to implement the project to my local machine, so I plan to do that this upcoming week. From there, I want to view one of the pages of the project and see what I can do with it.
- Nick Doty: This upcoming week, I plan to talk with the graduate backend lead and discuss what I should focus on in the coming weeks after I complete understanding neo4jDB, which I will also be doing this coming week.