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# EE/CprE/SE 4920 WEEKLY REPORT 01

1/21/25 - 1/30/25

sdmay25-21

Distributing a Fleet of Drones over an Area with No-Fly Zones

Trajcevski, Goce Advisor

[Nicholas Kokott](#) - Team Organizer

[Melani Hodge](#) - Algorithm Design/Implementation

[Cole Stuedeman](#) - Testing

[Everett Duffy](#) - Component/Module Design

[Ken Schueman](#) - Advisor Communication

[Samuel Russett](#) - Research Discovery and Testing

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## **Weekly Summary**

The overall objective for this past week was to convene with everyone and figure out where we were all at with the project since some of us did a little bit of work over the break. From there, we were able to determine that we needed to each try setting up the backend to ensure that it was working correctly, and after that, we started working on both the frontend and backend. The backend was able to setup different models to be sent to the database and to interact with the frontend. The frontend continued to work on the UI and started setting up how the different models that were made on the backend would be created in the frontend.

## **Past week accomplishments**

**Nick Kokott:** Set up the Django backend and got some of the models inputted to the system for future use. As well as this he created a detailed README in the gitlab to give clear instructions on how to set this up on any platform. He also demonstrated to the team how to run the backend. (8 hrs most over break) | Total: 47 hours

**Kenneth Schueman:** This past week I have completely redesigned the frontend, this includes a new design language, a homepage, signin/signup page, a notification popup and the basics of the discover page. As well as refactoring the frontend to allow easier implementation of future technologies like websockets for our frontend/backend communication. (9 hours) | Total: 25 Hours

**Everett Duffy:** This week I have been learning and practicing with Django and React to implement communication between frontend and backend. I have never worked with these frameworks, so to efficiently send and receive requests, I have been researching common practice in connecting the two frameworks. (7 hours) | Total: 23 hours

**Cole Stuedeman:** This past week, I have been familiarizing myself with PostgreSQL and PostGIS as I have never worked with either. I have also been reviewing Python and learning about methods to add/ create objects that keep track of the data of each drone. (6 hours) | Total: 21 hours

**Sam Russett:** This week I have been learning new technologies and revisiting technologies I have previously used to set up future work on the project. It has been a long time since I've used the Django framework for a project, and I have limited python experience, so I've brushing up on both of these so I can better understand how the backend will connect to the frontend. I also spent some time setting up and troubleshooting my local backend environment. (7 hours) | Total: 25 hours

**Melani Hodge:** This week I have been working on setting up the backend locally on my machine with the README.md instructions provided in the backend. I have been taking some courses on

React in order to be able to better understand the framework in order to contribute to the frontend design on our project. (8 hours) | Total: 27 hours

**Pending issues** *(If applicable: Were there any unexpected complications? Please elaborate.)*

Some platforms for some reason struggle to set up the backend successfully. They are able to pull in the files, can setup the virtual environment, however cannot run python manage.py runserver even after having their virtual environment setup the exact same way as other systems.

**Comments and extended discussion** *(Optional)*

We are still waiting on the Grad student to give us the algorithms he has been working on to implement into our backend, however at our Sunday meeting he should be giving this to us.

**Plans for the upcoming week**

**Nick Kokott:** Will continue developing out the models functions and linking them to API calls.

**Kenneth Schueman:** I have been working on redeveloping the frontend, we had a working prototype for last semester but it is time to start working on the final form and design language for the project.

**Everett Duffy:** Experiment with basic requests from frontend to backend.

**Cole Stuedeman:** Try to implement simple methods to add objects on the backend.

**Sam Russett:** Verify that my backend environment is functioning properly, and use the new progress made on the frontend to develop some relevant backend methods.

**Melani Hodge:** Implement necessary pages in the frontend and look into integrating the frontend with the backend.

**Summary of weekly advisor meeting** *(If applicable/optional)*

This advisor meeting was a check to see where we were with some information on what to do next. We were told to start getting the models ready and think deeply about what each one would need and how they would be linked (one-to-one, many-to-one, etc.). We also learned that we would be getting the grad students python code this upcoming week and would be able to see how the different data sets would work within it.