What went well:

- The design and the implementation of the database. The schemas fit what data we need for the drone swarms.
- Implementing the Mavlink library for drone connections in python. We have been able to connect to a drone and achieve flight in simulation.
- Keeping our GitHub properly maintained with clean merges and specific and meaningful branches.

What didn't go well:

- Connecting the React front-end to the Fast Api and the Postgres instances in the Docker container.
- Some of our code for the Fast Api functionality didn't scale well, so we refactored it to make it more modular.
- Finding free Apis for the mapping of the drones. We decided to use Leaflet for the maps but it did not have the full functionality that we were originally looking for.

What could be improved:

- Remembering to write an update post in the discussion board and daily journal. Members were attending the sprints but forgetting to document their progress.
- Do a better job collaborating on connecting the many components of this project. The individual work was done on time, but more effort needed to be put into how their segment connected to the other pieces.
- Creating documentation for each section of code that clearly describes the functionality and structure.

Challenges:

- It was difficult to keep the docker container working when we added new features and tools.
- We had to learn React and front-end design because there was nobody on the team with any experience in it.
- Finding a time in the lab to have a lab member assist us for a test trial with our drone connection software.
- Setting up MavProxy (simulator) was difficult, and we could only get it working on two machines.