

## **EE/CprE/SE 491 WEEKLY REPORT #2 - 2/18/23 – 3/4/23**

**Group number: sd-may 23 50**

**Project title: Collaborative Surveillance of Large Geographic Area by Fleet of Drones**

**Client &/Advisor: Goce Trajcevski**

**Team Members/Roles:**

**Rowan Collins - Backend and Testing**

**Joseph Edeker - UI/UX, Frontend Management**

**Jaden Forde - Client Interaction, Frontend and Backend**

**Thomas Glass - Backend with Security Emphasis**

**Jacob Houts - Backend Developer**

**Marcus Jakubowsky - Team Lead, Project Management and Backend**

### **o Weekly Summary**

Continued work on respective systems. The Python module has direction and more clarity on how to run the algorithms in a standardized manner. The Spring Boot module has added functionality for file upload, and will be seeking direction for endpoint & model expectation. Figured out queue requirements in using RabbitMQ to communicate between backend modules. Frontend has completed the requirement to send upload files and setup algorithm inputs.

### **o Past week accomplishments**

**Rowan Collins** - Worked alongside Jacob Houts in order to allow file uploads, and saving a file path inside the database

**Joseph Edeker** - Created and refactored pages for frontend.

**Jaden Forde** - Worked on all parts of the Python backend

**Thomas Glass** - Added web page component to send file upload.

**Jacob Houts** - Worked with Rowan to implement file upload endpoint and connected runs to users allowing users to have multiple runs. Created endpoint to return a list of files that have been uploaded.

**Marcus Jakubowsky** - Created DB schemas / Object models for backend. Coordinated team for back/front end connectivity.

### **o Pending issues**

**Rowan Collins** - Need to sit down with frontend and go into detail about the endpoints required

**Joseph Edeker** - Need to lift state or create stores for certain React components to prepare to account for data flow. Need to write components and logic for rudimentary statistics on algorithm results.

**Jaden Forde** - Need to make some changes to the algorithms to make them work with our system. Sending emails through an API is somewhat complex to set up.

**Thomas Glass** - Combine work with Joe's web pages.

**Jacob Houts** - Need to coordinate with the frontend team on what endpoints they need to get the UI functionality going.

**Marcus Jakubowsky** - Coordinate front and back end with specifics for endpoints and payloads. Finish object models so work can be delegated for that.

### o Individual contributions

<b>NAME</b>	<b>Individual Contributions</b>	<b>Hours this week</b>	<b>Hours cumulative</b>
<b>Rowan Collins</b>	Merged backend endpoints allowing run look up, and file paths to be saved to main. Worked on some endpoints that ended up being scrapped.	<b>10</b>	<b>22</b>
<b>Joseph Edeker</b>	Researched into Blueprint select, table, popover libraries. Implemented Setup/View page components with a new layout.	<b>10</b>	<b>25</b>
<b>Jaden Forde</b>	Set up rabbitmq and fastAPI on the backend, Looked into algorithms and understand them better now, looked into email sending	<b>12</b>	<b>25</b>
<b>Thomas Glass</b>	Created page with the ability to upload files.	<b>10</b>	<b>22</b>
<b>Jacob Houts</b>	Created the endpoint for uploading files to the backend, along with storing data in the DB. Connected the runs to users, allowing us to send notification to the user when a run is completed, lets user have multiple runs, etc.	<b>13</b>	<b>22</b>

<b>Marcus Jakubowsky</b>	<ul style="list-style-type: none"> <li>- Debugged docker images to allow frontend to test round-trip.</li> <li>- Created DB schema / Object models.</li> <li>- Communicated team &amp; faculty meetings.</li> <li>- Researched into and designed system to use RabbitMQ for our queue requirement.</li> <li>- Facilitating coordination between frontend and backend requirements.</li> </ul>	<b>14</b>	<b>31</b>
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o **Comments and extended discussion**

o **Plans for the upcoming week**

**Rowan Collins** - Implement more endpoints after speaking with the frontend, and implement new schemas and object types

**Joseph Edeker** - Define and standardize new endpoints for sending and receiving information from the frontend.

**Jaden Forde** - Continue work on python algorithms and integration into the backend module. Goal is to be able to accept a run request and process the run successfully.

**Thomas Glass** -

**Jacob Houts** - Coordinate with Joe on what endpoints the frontend will need to create the UI. Look into connecting the runs to the queue system Marcus has been looking into.

**Marcus Jakubowsky** - Finish the queue for Springboot (sending messages into the queue) & add RabbitMQ to docker setup. Standardize endpoints and models for the team to have working direction. Diagram system. connection points, and responsibilities.

o **Summary of weekly advisor meeting**

We met with Professor Trajcevski to discuss our progress so far and clarify our immediate goal, which is to run a simple algorithm and visually display the results on the web interface. We also met with Prabin, the grad student who developed our algorithms, and learned more about the algorithms and how we can use them. After these discussions we feel better able to make efficient progress towards our goals.