

EE/CprE/SE 491 WEEKLY REPORT #4 - 3/27/23 – 4/7/23

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

Spring Boot backend completed most of their needed endpoints and have begun focus on writing unit tests. Frontend integrated previously created components and made progress on creating requests from page data. Python is able to connect and process requests to an output; final testing should confirm before merging to main. Frontend and Spring Boot are now CI/CD'd and running on the server (sdmay23-50.ece.iastate.edu - ports 80 and 8080/api-docs). Meeting with advisor shifted next steps focus to visualization.

o Past week accomplishments

Rowan Collins - Continued working towards full test coverage. Added test coverage for RunRequestService and InputFileService. These changes have yet to be merged into main, which will be done this weekend.

Joseph Edeker - File Menu functionality and integration. Experimental designs for grid visualization of simulations.

Jaden Forde - Finished up Python, added support for input and output file saving to the proper locations, environment variables, and updated queue logic.

Thomas Glass - Continued work on frontend to backend connections from the frontend. Added the ability to send run requests from the frontend with all data being pulled from its appropriate card.

Jacob Houts - Implemented the run request endpoint for starting new runs, used the formatting to synchronize communication between the frontend and backend.

Created classes that allowed us to process incoming json information. Solved the infinite recursion problem when returning objects from the database.

Marcus Jakubowsky - Completed endpoints and logic for dealing with upload and receiving information about user algorithms. Added basic unit tests for those functionalities. Fixed incomplete run request endpoint & restructured logic to be in the correct layer. Added endpoint to get request output. Dockerized frontend react application. Created CI/CD for frontend react application, and deployed to server (sdmay23-50.ece.iastate.edu:80). Drafting dockerization & CI/CD for python module (pending merge).

o Pending issues

Rowan Collins - Finish up incomplete testing logic and merge changes to main.

Joseph Edeker - Define specifications for grid visualization.

Jaden Forde - Complete testing for python and merge to main.

Thomas Glass - Creating more frontend to backend connections.

Jacob Houts - Research how to unit test the controllers in our application. Figure out what endpoints we will need for the visualization.

Marcus Jakubowsky - Deploy python module once merged.

o Individual contributions

NAME	Individual Contributions	Hours this week	Hours cumulative
Rowan Collins	Finalized previous testing logic Implemented tests for both RunRequestService and InputFileService	10	Old: 34 New: 44
Joseph Edeker	Implemented state logic for File Menu component. Integrated File Menu into Dashboard, Setup, and View pages. Work on Flex Table and Canvas versions of Simulation Visualization.	12	Old: 43 New: 55

Jaden Forde	Python module: - Completed base request processing logic - Connecting to queue and db for input and outputs - Switched to using environment variables for file location	14	Old: 39 New: 53
Thomas Glass	Implemented frontend run request Some logic rework in frontend	14	Old: 36 New: 50
Jacob Houts	Implemented the run Request endpoint. Solved the infinite recursion problem when returning objects from the database. Coordinated with Marcus to create a plan for next steps to get visualization.	16	Old: 36 New: 50
Marcus Jakubowsky	- Completed endpoints & logic for user algorithm upload/get information/update. - Added basic unit tests for algorithm service. - Fixed incomplete run request endpoint & restructured logic to be in the correct layer. - Added endpoint to get request output. - Dockerized frontend react application. - Created CI/CD for frontend react application - Deployed frontend to our server at (sdmay23-50.ece.iastate.edu:80). - Drafted dockerization & CI/CD for python module (pending merge).	18	Old: 54 New: 72

o Comments and extended discussion

We are close to round trip functionality, more progress has been made on both the frontend and the backend these past two weeks. Afterward the focus will shift toward creating visualization for running simulations.

o Plans for the upcoming week

Rowan Collins - Continue working on broadening testing coverage along with working alongside Jacob and Marcus on backend features and fixes.
Communicate with Jacob to add testing coverage to controllers.

Joseph Edeker - Finalize a design for the simulation visualization page.

Jaden Forde - Finalize python testing and merge to main. Start on figuring out visualization.

Thomas Glass - Continue to create connections and work on frontend development.

Jacob Houts - Work with Marcus to develop a plan for what endpoints we will need to process the visualization data. Find a way to develop unit tests for the controllers with Rowan.

Marcus Jakubowsky - Coordinate with Joe and Jaden to figure out how we are going to go forward with visualization. Try to push the team toward finishing our project.

o **Summary of weekly advisor meeting**

Met with Professor Goce and Prabin Giri to discuss our progress in the past weeks. Showed them the backend endpoint progress and the frontend website. Got feedback about modification and directions moving forward and thinking about visualizations.