EE/CprE/SE 492 STATUS REPORT
04/03/2025 – 04/17/2025
Group number: 20

Project title: HADES: Holistic Astronomical Database Exploration System

Client/Advisor: TRAJCEVSKI, GOCE

Team Members/Role:

NAME		ROLE
BYRD, JAMES	–	Database Backend, Cyber Specialist
COLLINS, EAMON	–	Client Contact, Database Backend
NORRIS, ALEK	–	Database Backend, Cyber Specialist
POLSTON, ALEXANDER	–	Database Backend, Cyber Specialist
SNYDER, ANDREW	–	Database Backend, Cyber Specialist
VARNITSKYY, SVYATOSLAV	–	GUI Specialist, Database Backend

Summary:

Over the past two weeks, our team met with our advisor to discuss final testing requirements and visual enhancements to improve the application's appearance. Additionally, we began work on the IRP presentation, user manual, and technical documentation; created additional tests to improve code coverage; implemented more robust security measures; refined and debugged existing components; and merged and streamlined our repository to ensure smooth integration. Overall, the team has effectively collaborated to complete all necessary tasks in preparation for the IRP board presentation.

Accomplishments:

- Enabled backend computation offloading to local or remote machines.
- Achieved full security coverage with HTTPS, SSH/HTTP DB connections, and encrypted local data.
- Established frontend testing with CI pipeline; authored tests and tracked coverage needs.
- Fixed UI bugs, improved formatting, and enhanced visual polish.
- Reviewed and merged team code, finalized user manual, and updated technical documentation.
- Refined GPT integration and initiated final presentation and project poster.

Individual contributions:

NAME	Individual Contributions	Hours this week	HOURS cumulative
BYRD, JAMES	Bug fixes on Utilities page graphical formatting, reviewed team work on User Manual for merging. Created and started the teams final presentation.	8	94
COLLINS, EAMON	Finalized the user manual for the project. Fixed and pushed multiple issues related to graphical defects of the application. Reviewed and proved multiple merge requests. Started work on project poster.	8	99
NORRIS, ALEK	Implemented encryption for local storage to secure data at rest, automating calls between the frontend and backend for encryption and decryption. Also pushed updates and fixed minor errors while refactoring GPT integration for improved efficiency.	8	101
POLSTON, ALEXANDER	Reviewed and approved multiple merge requests and worked heavily on preparing and editing the final design document.	12	100
SNYDER, ANDREW	Worked to set up the option for remote backend. I then updated the CI/CD pipeline to deploy a docker image containing our backend to our virtual machine on each push to main. I also updated unit tests to have complete backend coverage. Finally, I helped team members update code to fit our team plan.	17	120
VARNITSKYY, SVYATOSLAV	Completed frontend code testing setup. Added pipeline to project repository to prevent regression and ensure coverage requirement is met. Wrote test code for 6 files. Created issues in gitlab to determine which files still require testing.	15	115

Upcoming Plans

With the IRP and finals quickly approaching, the team will be prioritizing bug fixes, optimizing existing components and code, conducting additional testing, and enhancing the frontend visually for a more polished look. Additionally, the team plans to complete the poster, user manual, updated technical documentation, and final presentation.

Summary of advisor meeting

During our advisor meeting, we discussed the client's final requirements, specifically additional code coverage, a more refined frontend, necessary adjustments to technical documentation, and tips for the upcoming IRP presentation. Overall, the client is satisfied with our progress and is looking forward to seeing the final product.