

**EE/CprE/SE 491 WEEKLY REPORT 10**  
11/15/2024 – 11/21/2024  
**Group number: 20**

**Project title:** HADES: Holistic Astronomical Database Exploration System

**Client/Advisor:** TRAJCEVSKI, GOCE

**Team Members/Role:**

<b><u>NAME</u></b>		<b><u>ROLE</u></b>
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

○ **Weekly Summary:**

This week, our team continued working on all aspects of the project, including the frontend, backend, database, and data parsing. We developed scripts for parsing data, displaying information, and capturing user input. Updates to the UI include enabling communication with the Python backend and adding a query-saving feature. Additionally, the final design document draft was updated to reflect the progress made this week, with new sections added to capture recent developments.

○ **Past week's accomplishments:**

- Frontend to backend (Python) communication established
- Query Saving Feature implemented on the Frontend
- Compiled a draft for the final design document

○ Individual contributions:

<u>NAME</u>	<u>Individual Contributions</u>	<u>Hours this week</u>	<u>HOURS cumulative</u>
BYRD, JAMES	Continued learning about the React framework and investigated PostgreSQL usage for database creation and querying. Contributed to weekly team documents, including the Report, Design Document compilation and proofreading, and Lightning Talk.	4	44
COLLINS, EAMON	Worked on communicating with the client. Worked on editing and finalizing the final draft of the design document. Worked on this week's lighting talk. Investigated AI prompting. Worked on Senior Design website.	5	45
NORRIS, ALEK	Worked on the weekly lightning talk and contributed to the writing of this report. Made some small changes to the GIT, ensuring a more unified layout in structure for future collaborative development.	4	45
POLSTON, ALEXANDER	Set up documents and work spaces for the week and continued work on the final design document. Contributed to weekly tasks.	5	45
SNYDER, ANDREW	Created a Python backend and implemented communication between it and the user interface for handling natural language processing. This doesn't yet translate the natural language to SQL. I also added the ability to locally save and view saved queries between sessions on the user interface. Finally, I updated the final lightning talk and the weekly report for the week.	7	49
VARNITSKY, SVYATOSLAV	I worked on the ethics lighting talk. I contributed to the weekly report. Began determining the potential front end for the About Us page.	4	48

### Plans for the upcoming week

- Continue development across all project components: Frontend, Backend, PostgreSQL.
- Create and outline plans to keep the project within chosen ethical standards, meeting basic requirements for all users.
  - Include privacy of the user's data, and that no data is shared in secret.
  - Acknowledge the version of the source data used in queries to remove ambiguity, and to ensure clarity of results.
  - Include the NLP query statement alongside its results.
- Begin Drafting ideas for Unit tests
  - Begin creating tests
  - Define what measures success for each test
  - Plan to address issues if a test fails.
- Begin Preparations for the final presentation
  - Ensure clear, concise language, and limit full sentences.
  - PRACTICE

### Summary of weekly advisor meeting

- Discussed ethical considerations for this project, such as handling AI generation.
- Discussed plans for the final presentation.
- Discussed the importance of not procrastinating on the final presentation and the design document.