

**EE/CprE/SE 491 WEEKLY REPORT 06**  
**10/18/2024 – 10/24/2024**  
**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
VARNITSKY, SVYATOSLAV	–	GUI Specialist, Database Backend

○ **Weekly Summary:**

This week, our group focused on planning and organizing the project, working on design elements, setting deadlines, and finalizing key tools and technologies. We addressed client concerns and are now ready to move forward confidently with the implementation of the project.

○ **Past week's accomplishments:**

During this week, our group accomplished several key tasks in developing our project. We drafted flowcharts and Gantt charts, set milestones, and established deadlines for critical tasks and deliverables. Additionally, we refined the UI design using Figma, created a use case flowchart for key features, and addressed outstanding issues with the client, including security concerns, frontend-backend communication, and feature prioritization. We also organized our GitLab repository and finalized the languages and frameworks, selecting React with TypeScript for the front end and Python for the back end. Overall, the group feels confident about the upcoming weeks and is ready to start implementing the project with a clear sense of direction.

**Task Section:**

- Group
  - Create an online repo for coordinating workflow
  - Begin work on React UI
  - Begin research on AI query generation methods
  - Come up with schema
  - Work on Parsing CSV implementation
- Individual
  - Perform individual research on AI query generation with natural language models

○ Individual contributions:

<u>NAME</u>	<u>Individual Contributions</u>	<u>Hours this week</u>	<u>HOURS cumulative</u>
BYRD, JAMES	Performed individual research on React web app development for front-end UI. Created component diagram for detailed design doc, as well as other deliverables for the week..	5	27
COLLINS, EAMON	Worked on Name and logo. Communication with Client. Developed Overview diagram. Researched for parsing data from CSVs and Normalization of data.	5	28
NORRIS, ALEK	Created a Use case flow diagram, Assisted in making all deliverable documents this week. Helped determine the scope of the security aspects of the project.	5	26
POLSTON, ALEXANDER	Set up documents for the work week. Worked to complete part 2 of the design document, Lightning Talk 4, and the weekly report. Performed some research on applicable engineering standards related to our project.	6	27

SNYDER, ANDREW	Worked to complete the second part of the design document. Also helped to create our presentation for Lightning Talk 4. Beyond this, I looked into more tools we could use to implement natural language processing and strategies we could do to eliminate the risk of incorrectly generated queries.	5	30
VARNITSKY, SVYATOSLAV	Created home screen design in Figma. Created a React app and pushed to GitLab. Researched React project structure to ensure smooth and organized development. Assisted in creating lightning talk presentation.	5	26

#### Plans for the upcoming week

- Begin the early creation of our User Interface,
- Begin work on the CSV parsing method
- Research into setting up a testbed for natural language processing
- Complete regular weekly activities

#### Summary of weekly advisor meeting

- On Wednesday, we met with Dr. Trajcevski to cover the initial draft of the requirements and engineering standards sections of our design document, as well as what our next steps should be regarding the progression of our project. We also discussed the security aspects of our project. We shared and received feedback on draft designs and visuals created for our weekly in-class activity.

#### **Updated Figma Design:**

