Group number: 10
Project title: "Visualizing Probabilistic Whereabouts of Moving Objects"
Client &/Advisor: Goce Trajcevski

Team Members/Role:
Nathan Thoms - Frontend Lead
Mara Prochaska - Backend Lead
Eric Jorgensen - Documentation
Ryan Cook - Backend / Frontend Switch

Report Summary

For the week of March 20th through the 26th, our team has continued progressing through the design process. Namely, a high level systems diagram has been created and was used to guide discussions and iterate upon it. Discussions were primarily related to two of the six subsystems comprising the web application; that is data input and management and whereabouts algorithm entities. The figure under the accomplishments section of the report provides a clearer picture of the subsystems and their interdependencies.

The questions brought up in the discussion were:

- How are we going to build support for managing idiosyncratic datasets?
- How are the whereabouts algorithm results going to be visualized?
- What format will be most effective for storing data sets?

These are great questions that will drive our team to seek solutions in the coming week.

Accomplishments

The tangible accomplishments for this week, partly alluded to in the report summary section, are as follows:

- Expanded on our team's plan for project management and organization
  - Github repository with folder for front and backend
- Revision of prior weeks tasks decomposition diagram. Shown below as Figure 1
- Decomposed tasks and corresponding sub-tasks into milestones - meaningful progress stamps
- Created evaluation criteria for determining whether a milestone has been achieved
- Organized tasks/milestones using a Gantt chart to outline a tentative timeline shown in Figure 2 and 3
- Elaborated on the possible risks our team facing during the design implementation phase
  - Assigned probability to risk being realized
- Estimated the hours required to complete tasks accompanied by an explanation of reasoning
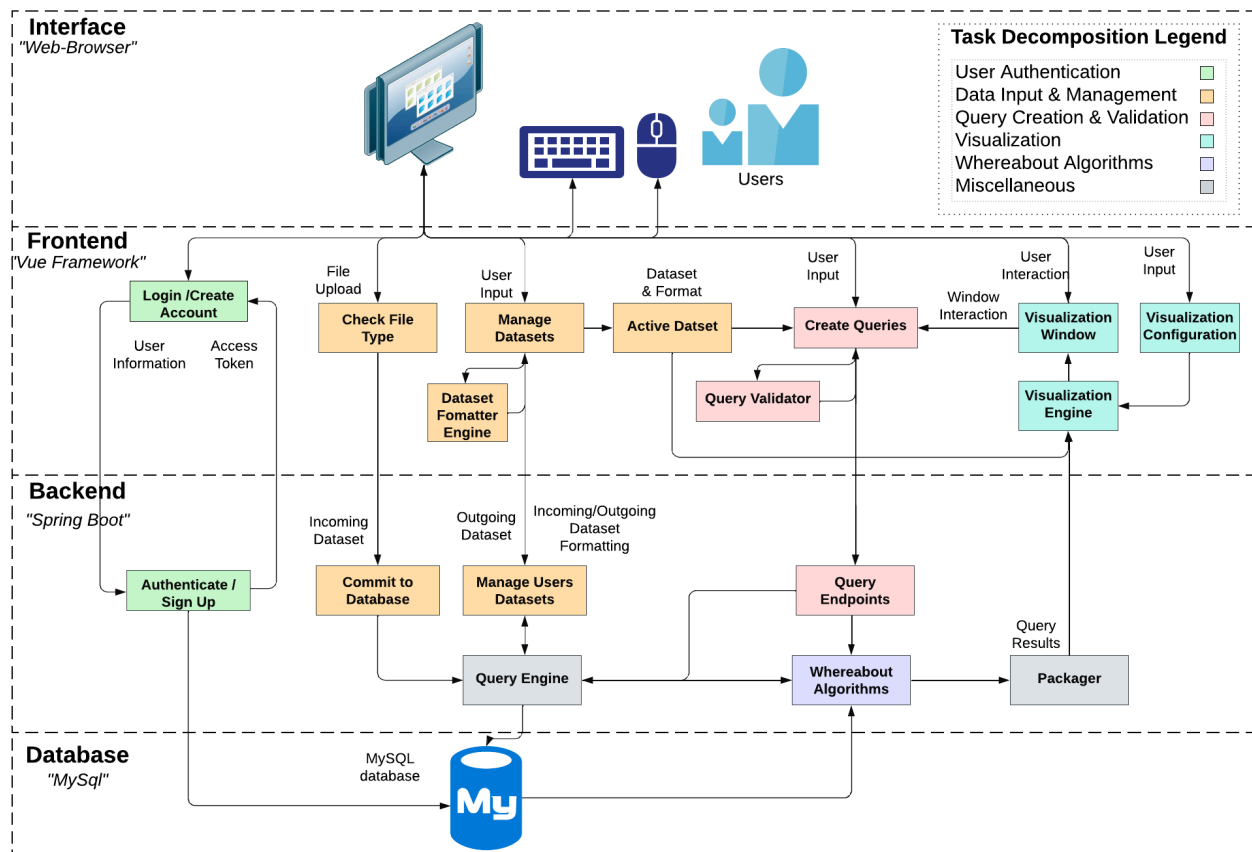

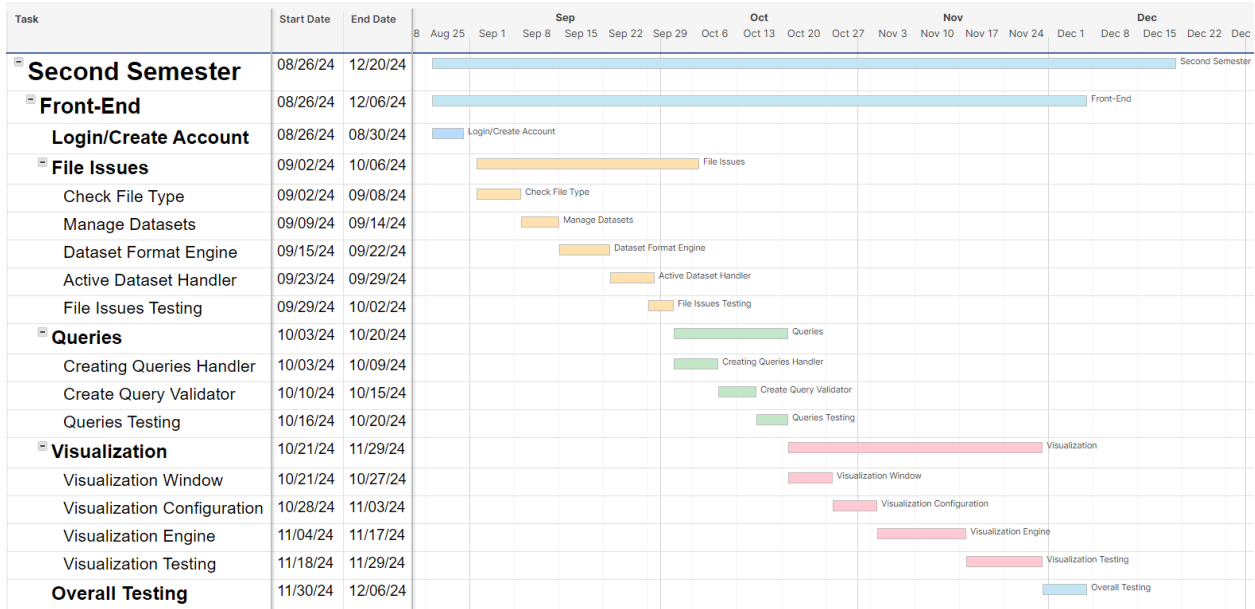**Figure I** - *Systems diagram perspective of task decomposition.*
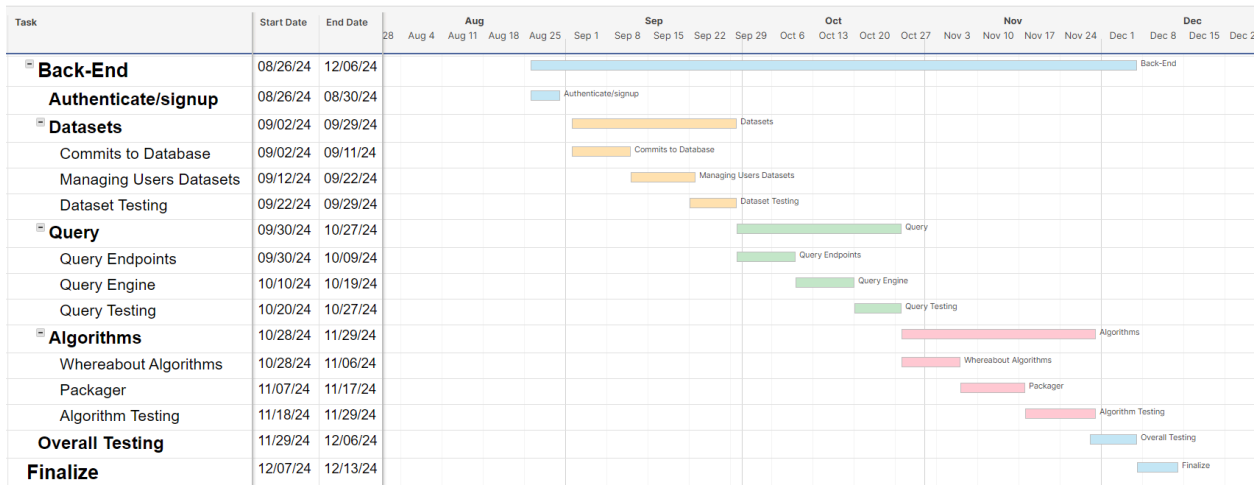
Figure 2 - *Front-end Gantt chart*

Figure 3 - *Back-end Gantt chart*

Pending Issues

The issues for this week are very minimal and related to the questions mentioned above in the report summary. How are we going to build support for managing idiosyncratic datasets? How are the whereabouts algorithm results going to be visualized? Although we have discussed these questions with our advisor, we continue to seek concrete solutions in the next week.

Individual Contributions

Team Member	Individual Contribution	Hours this Week	Hours Cumulative
Nathan Thoms	Designed systems diagram & proposed team milestones	8	37.5
Mara Prochaska	Wrote Program Management Rationales and Documented Additional Resources Needed	7	30.5
Eric Jorgensen	Risk Mitigation & management	5	25
Ryan Cook	Created Front and Back end Gantt charts, Created Effort Requirements	7	26

Upcoming Plans

In the next week we plan on answering questions listed in pending issues. To answer these questions we plan on creating a lower-level UML diagram describing the backend API, that will include showing how and what data is being passed between frontend and backend and backend subsystems. Through this exercise, we will think more deeply about the resources each subsystem needs to perform its function effectively.

Action Items

Team Member	Individual Goals	Estimated Hours
Nathan Thoms	Create UML diagram for backend API	6.5
Mara Prochaska	Polish wireframe diagrams for system views, begin design doc 4 and update team website	7
Eric Jorgensen	Work on design doc 4, weekly report, lightning slides	4
Ryan Cook	Work on systems diagrams for detailed design.	5

Advisor Meeting Summary

This week during our advisor meeting we discussed improving team communication and focusing expectations for team member participation. We also reviewed the design document relating to our project plan and discussed how to improve the organization of each section. Dr. Trajcevski provided additional clarity on the requirements of the final design document. He suggested that we should aim to create a prototype if possible, although remember that it is not strictly necessary.