

EE/CprE/SE 492 Status Report 4

Oct. 3 - Oct. 31

Group number: 10

Project title: “Visualizing Probabilistic Whereabouts of Moving Objects”

Client &/Advisor: Goce Trajcevski

Team Members/Role:

Nathan Thoms - Team Lead & Frontend Developer

Mara Prochaska - Backend Developer

Eric Jorgensen - Documentation

Ryan Cook - Fullstack Developer

Report Summary

During the last month, we have finished implementing data input on the frontend and backend. We have started working on query choices on the frontend and implementing algorithms on the backend such as bridgelet algorithm. We have also continued discussions with our faculty advisor on algorithm implementation, particularly intersection between ellipses and further improvements to the UI. We are still on track for project completion, especially pending the completion of algorithms on the backend.

Accomplishments

Frontend now has a significant amount of functionality complete, including data entry and query UI. Queries are created on the frontend by creating and adjusting an ellipse figure on the map. Data sets are now able to parse and be stored in the database from the backend, and we have completed data connection between the frontend and backend. One additional feature that still needs to be completed on the backend is converting between Cartesian coordinates and geographic coordinates to make calculations easier. The updated image of the map interface for users with movable data points and connections is included below. This shows how queries can be created by users on the frontend.

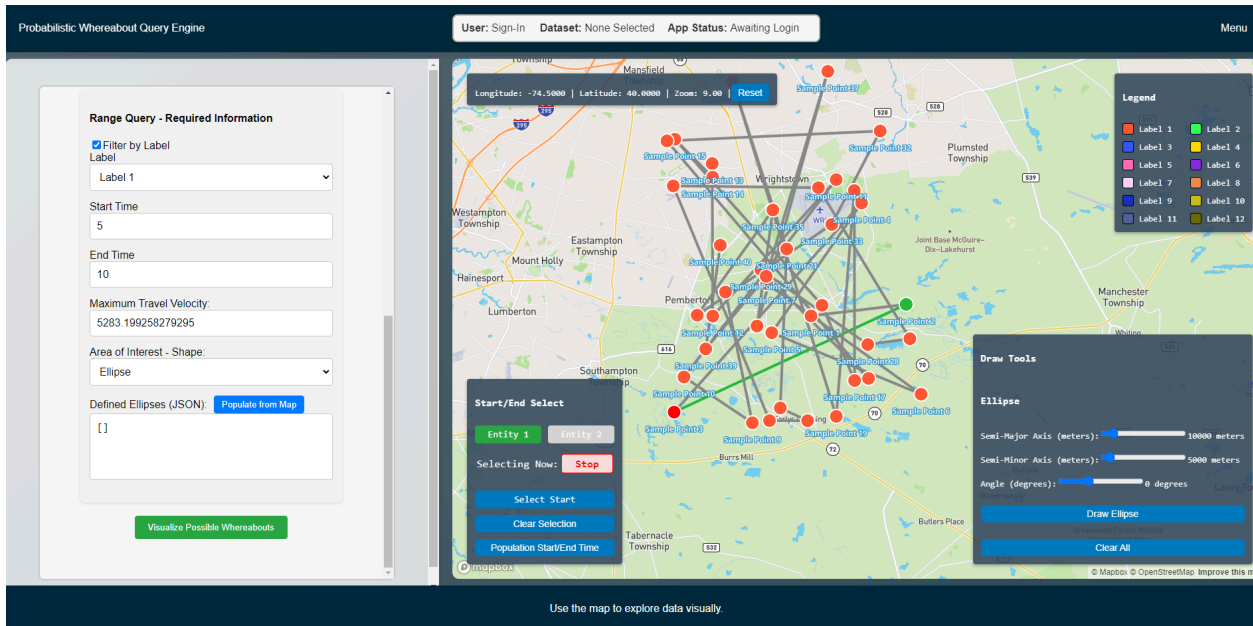


Figure 1 - Query Creation & Visualization UI Components.

Backend implementation will continue with the main focus being the creation of classes focused on enacting the algorithms outlined by our faculty advisor. We hope to at least implement one algorithm and may need to save additional algorithms/query types for a future project due to time constraints.

Pending Issues

No current pending issues.

Individual Contributions

Team Member	Individual Contribution	Hours this Period	Hours Cumulative
Nathan Thoms	Frontend work, improve query, finalize data input	15.5	93
Mara Prochaska	Status report, meetings, backend work	14.5	79
Eric Jorgensen	Advisor meeting, team meeting	4	43
Ryan Cook	Backend work, data set format	16	79

Upcoming Plans

Frontend will finalize UI and algorithm/query options with a focus on testing the connection to the database and backend code. Backend will work on completing the backend algorithm implementation and conversion between data point types (Cartesian/geographic). Lastly, our team will need to create the presentation for our meeting with Professor Shannon and ensure we are on track for completion of our final project.

Action Items

Team Member	Individual Goals	Estimated Hours
Nathan Thoms	UI development, finalize frontend queries	12
Mara Prochaska	Backend algorithm implementation	12
Eric Jorgensen	Attend team meetings, contribute to code	8
Ryan Cook	Backend data access, data parsing	12