EE/CprE/SE 491 WEEKLY REPORT 4
Feb 21 - Feb 27

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

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

Report Summary

During this week, we took a deep dive into creating the link between the user needs/requirements and what that means for the features we need to build into our application deliverable. Admittedly, we could have been doing a better job in class brainstorming, however at that point in time we were still trying to understand the scope and high level project details. Throughout the rest of the week, we were able to fine-tune the user profiles we chose in order to best fit the scope of the project. We ended up choosing one user profile that is most closely tied to the Bridglet algorithm, one user profile that is specific to the Cone algorithm, and one that is more generic and could use both.

This week considerable time was spent establishing users for which the probabilistic location tools could prove useful. Earlier weeks were spent understanding the tools; without the understanding and guidance from our faculty member, it was challenging to define users in class since we did not have a clear scope for who would use the tool. Unlike some groups we do not have a cut and dry user base - we learned the basis of tool functions and used our imagination to research possible user groups. After clarifying with out faculty advisor, we were able to determine that the msot beneficial user profiles would be two or three specific use cases tied to professions such as Zoologist, Chemist, and Astronomer, with one more generic profile labeled

Researcher. The researcher profile is intended to ensure the tool is versatile enough to be applied to many industry applications, while also having the niche settings for the chosen groups above.

This week, we were also able to update our team website for the first time and start uploading our completed documents. Now that we have figured out how to update the website, we will be able to start updating it with information as we learn and complete more for the project.

Accomplishments

As stated above, our primary accomplishments this week were related to defining user profile needs and requirements. Below we have provided a more complete list of accomplishments:

- Brainstormed focuses for the project and identified which part of app development each member will focus on (All)
    - Nathan Thoms - Focus on frontend development with a focus on understanding algorithms and math necessary to output accurate graphs
    - Mara Prochaska - Focus on backend development and also assist with frontend UI and graphics as needed
    - Eric Jorgensen - Does not have app development or programming experience, so will focus on documentation and learning these skills in order to help with development as he is able
    - Ryan Cook - Focus on backend development, especially after completing COM S 309, will also assist with frontend development
- Looked at design documentation from previous “excellent” teams as directed by our faculty advisor (Nathan, Mara, Ryan, Eric)
- Updated team website with completed team reports and member names/profiles (Mara)
- Created Lightning Talk Presentation Powerpoint for submission relating to the problem and user profiles we created (Nathan, Ryan, Mara)
- Organized users duties/needs, functional, aesthetic, and experiential requirements. This will allow us to understand the shared and unique requirements of our user base. (Nathan, Ryan)

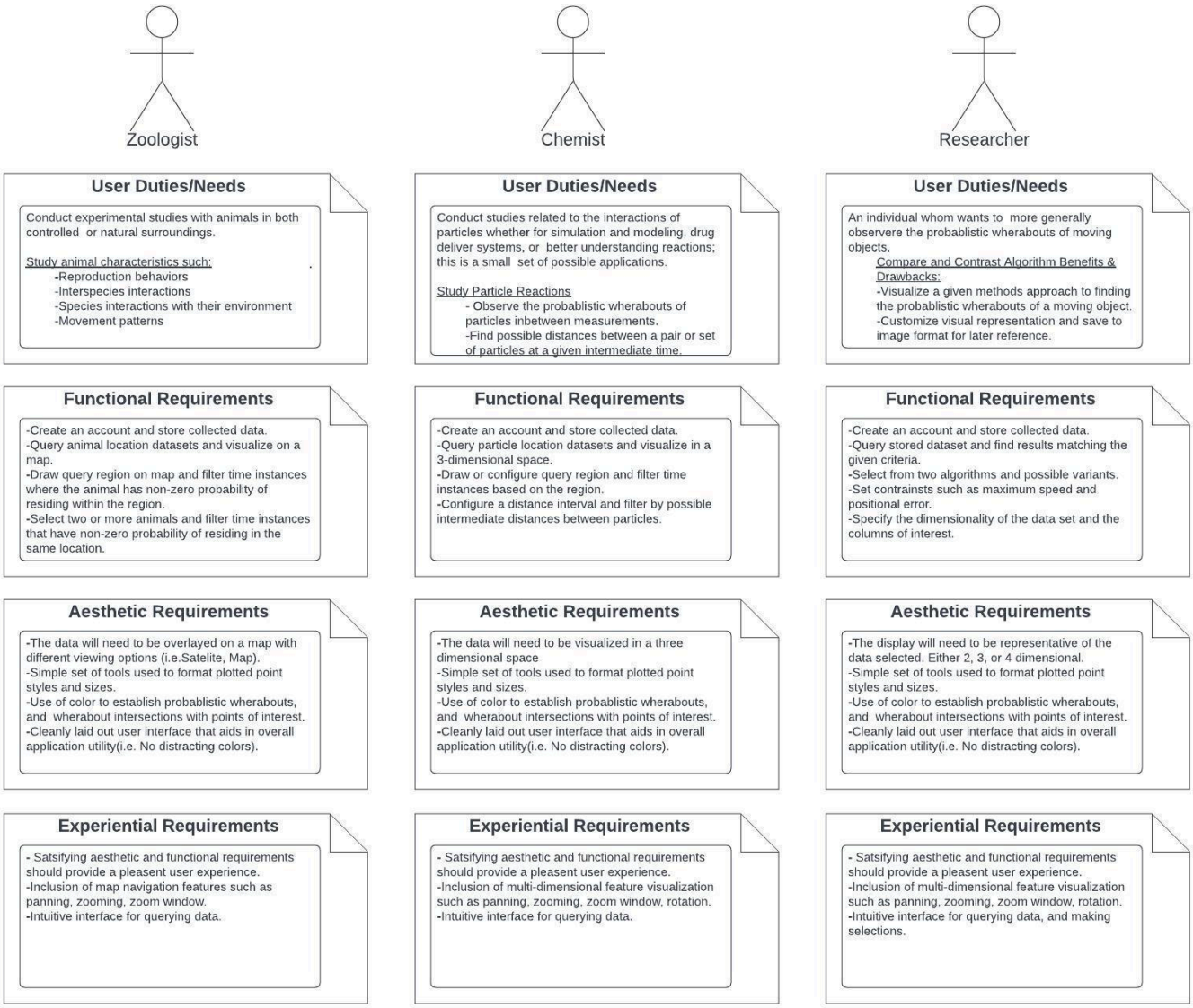

Figure 1 - *User Needs and Requirements*

Pending Issues

We do not have any hard block pending issues, but we are still working on defining what parts of app development will belong to each team member. We are already anticipating that the proposed scope of the project will be relatively large for the small team size and experience of team members.

Individual Contributions

Team Member	Individual Contribution	Hours this Week	Hours Cumulative
Nathan Thoms	Established concrete set of users, their needs & application requirements. Continued looking into framework options.	5.5	19.5
Mara Prochaska	Began team website work and brainstorming users/requirements/Lightning Talk PPT	5.5	14.5
Eric Jorgensen	Looked into materials on connected topics. Began user needs/reqs, reviewed past sr design project docs	2	10
Ryan Cook	Looked over material, looked into possible software	2	10

Upcoming Plans

Within the next week we plan on having researched tool compatibility, or at least begun to. We are interested in establishing a set of frameworks that will keep us organized as well as show compatibility with visualization tools (i.e. does a react framework work with the D3 visualization tool set and geo-mapping library, are you able to overlay D3 plots overtop a given geo-mapping library).

Action Items

Team Member	Individual Goals	Estimated Hours
Nathan Thoms	Create a high level diagram of application structure.	5.5-6
Mara Prochaska	Update team website and assist with generating requirements documentation	6
Eric Jorgensen	Document user needs and requirements	5
Ryan Cook	Research/experiement with software tools for backend and frontend	6

Advisor Meeting Summary