Project Milestone 9: Final Individual Report [individual]

Student name: Connor Schultz Student number: V00872923 Project name: GISalmon

Part I: Reflection [max. 2 pages]

1. Reflection on Learning

There have been many triumphs and many hardships throughout this project, particularly due to the circumstances that it was performed under. Completing a computer science group project during a global pandemic is not exactly ideal however, I am proud of my group for utilizing available tools to maintain communication. The class has made me much more thoughtful when making design decision choices. Symbology and colours convey meaning, and certain things such as the colour red have an objectively understood meaning of “stop” or “danger”. Working with these natural perceptions of visual variables instead of fighting against them is key to a good visualization.

Overall however, my main learning takeaway was certainly the design and development of the application. I used many tools and spent many hours cleaning and preparing data, reading documentation and problem solving. The ideas presented throughout the class such as animated visualizations and interactive visualizations gave me a starting point to take a deep dive into data visualization using python3.

2. Key Contributions to Project

My main contribution was the development of the GISalmon interactive web map application. I built the application from the ground up, with input from my group members. I decided to take on the application and my group members gave me the green light. I tried to use my skills in geo-spatial visualization from my degree in computer science and geography to make an aesthetically pleasing and usable visualization, which I have done. Many days and many hours were spent developing the application as the original plan was changed due to unavailable data. All these problems and triumphs resulted in a great learning experience for me and I am very proud of what I have made.

3. Visualization Critique

I am very proud in the way the visualization turned out, with my favourite feature being the map. The map has tons of interactivity such as a hover action to reveal information, base map selection including satellite imagery, overlay selection from multiple salmon species and zoom and scroll controls. Colour brewr was used to select the colour scale to encode the WSP Status variables to ensure it was visually “linear”.

I also really enjoy the aesthetic of the time-series animated line graphs. Although I could have made them easier to obtain quantitative information given more time, I think they look great and show the overall trends of various salmon species overtime. Colour brewr was used to select a qualitative categorical colour palette for each salmon species.

Overall, I am very happy with the visualization. Given more time would have allowed me to fix some minor bugs such as the animated time-series not restarting upon hard restart or some layers disappearing (rare). I would have also added more data from more conservation units, more salmon species maybe even more provinces. The ability to poll for live data would have also been a great feature but not in the scope of this particular project.

4. Looking Forward

The main challenges faced by our group were most certainly COVID-19 related. Not being able to meet in person is quite difficult especially when you are working on something visual and design based. It can be difficult to convey these ideas through text or voice chat. I do not think our time management as a group was particularly great and I feel that is something that all of us learned from after a few close calls.

I feel like my greatest strengths are my geo-spatial development skills and I tried to utilize those throughout this project. On the other hand, my greatest weakness is definitely my organizational and time management skills. I did get better towards the end of the semester but the constant due-dates of the course sometimes became tough to keep track of. This will be something I need to work on for years to come and will be a great skill to become more efficient and less stressed.

Part II: Evaluation [max. 2 pages]

1. Peer Evaluation for Group Work

Please write the name of each of your group project members in a separate column. For each person, **including yourself**, indicate the extent to which you agree with the statement on the left, using a scale of 1-4 (1=strongly disagree; 2=disagree; 3=agree; 4=strongly agree). Total the numbers in each column.

Please think hard and honestly about each of the categories and how each group member performed. It is not necessary that everyone get the highest score on each item. Different people will have different strengths and different contributions. Please do your evaluations independently – do not share or discuss your scoring or come to a decision based on a group opinion. I want a rating from each of you, based on your perceptions and experiences.

Evaluation Criteria	Connor Schultz	Ben Wilmot	Wyatt Timmermans
Attends group meetings regularly and arrives on time	4	4	4
Contributes meaningfully to group discussions	4	3	3
Completes group assignments on time	3	3	3
Prepares work in a quality manner	3	3	3
Demonstrates a cooperative and supportive attitude	4	4	4
Contributes significantly to the success of the project	4	3	3
TOTAL	22	20	20

2. Numerical Peer Evaluation

Please use this form to evaluate the contributions of each team member (except yourself) to the group effort. Consider attendance and participation in group meetings, individual contributions to idea generation and research, communication within the group, contributions to implementation, leadership in the group, etc. These evaluations are **completely confidential and will never be shown to your team members**. Please respond as honestly as possible.

Please allocate a total of 100 percentage points among your team member, **excluding yourself**, with higher percentages going to those members who contributed most. In the case of equal contribution, points should be divided equally among team members.

	Ben Wilmot	Wyatt Timmermans	Total
% points	60	40	100%

3. Feedback on Team Dynamics

a. Provide specific comments about any group members

- Ben did a great job on the final video as well as the final presentation
- Ben also did a great job at making sure everyone was communicating and on top of their tasks
- Wyatt spent a lot of time on the reports and did a lot of writing for the group. He leads a busy schedule with a job but always found time to make sure his work was done on time.

b. How effectively did your group work?

Our group worked quite effectively throughout the semester, with our biggest drawback being that we are all very good friends so it was easy to get distracted. We had a few good nights together, one where we made a curry and worked on the project together that was a great bonding time and lead to some good results and some good laughs.

c. Were the behaviors of any of your team members particularly valuable or detrimental to the team? Explain.

Everyone did what was required of them. I would not say that anyone went particularly above and beyond but nobody was detrimental to the team either. I would work with Wyatt and Ben again at anytime on any type of visualization project.

d. What did you learn about working in a group from this project that you will carry into your next group experience?

- Setting up communication channels (Slack, discord, etc.) early is crucial
- Comment your code!
- Do not get disheartened if things are not working properly. Go to bed, drink a coffee, go for a walk. Staring at the screen for hours is not a form of debugging unfortunately.
- Do group activities together! You have to spend lots of time with your group members, you should get to know them.
- Learn to make sacrifices. The application is not going to be able to have every feature you imagined. Eliminate less important ideas and do not be disappointed in things not working out the way you intended.