Data Visualization Report

Course Work

Group 15, Edinburgh

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***Role*:** Team Leader

Key Responsibilities: I split the work (different charts to each of them) among the group members as a group leader. I created a **perfect plan** to achieve the final dashboard and a clean timeline and weekly tasks to be accomplished. I explained the concept of **version control systems** (GIT) and how to structure the code to make it readable by encapsulating the charts in a class (object-oriented programming paradigm). I have implemented a **Stacked Bar Chart, Bar Chart, and Line Chart**. I also fixed many errors in layouts and styling. I updated the readme file throughout the coursework timeline (complete contribution added in peer form). I implemented the high-level complex filter which **links all the charts** in the dashboard.

Key Challenges, Lessons & Future Work: The biggest challenge I faced in working as a team was, someone in the team being irresponsible (contributing little before a few days of the deadline). I have learnt that a **backup** plan must be made even before starting to code if someone does not contribute enough which eventually impacts the remaining ones in the group, this helps me further in my career. This coursework has allowed me to work as a **team** ahead of my software engineering career. I gained experience with a few advanced concepts of GIT like **rebase, merging conflicts, and reverting to previous versions** when something bad happens. The coursework has given me an understanding of how important it is to develop a good readme file in the project repository (Gitlab/GitHub). I also learned how to bring the final dashboard to the layout of our choice by grasping the concepts of **grid and flexbox**. Tracking the daily progress & updating the progress in the repository via gitlab gave me the motivation to be consistent.

The key takeaways from this coursework are having weekly meetings with team members and discussing the progress to understand the status of the project, revising the concepts as early as possible to kickstart, and recalling the advanced concepts of version control systems while working in a group.

Critical Analysis: The charts we produced are completely **scalable** and **reproducible**. We have structured the code into **classes** and put all the related files into respective folders to make the codebase **maintainable**. We have added comments to all key parts of the code which helps people to understand the code at first glance. We followed the best practices which were taught in the lab sessions and implemented our dashboard.

Lecture sessions helped me to choose the **appropriate charts** for our dashboard (eg Stacked Bar chart for composition, Bar Chart for distribution etc) and how important **storytelling** is. Although we tried our best to achieve our final dashboard, there are a lot of future **improvements** that can be made. Here are a few: prettifying the tooltips (by wrapping them in a div box), a few more complex interactions like filtering by data (from date - to date), throwing alerts when the selected country is

not present in the charts dataset, translating this dashboard to a responsive design smaller screens (mobile etc), layout adjustments in donut chart.

Resources used & Reference

- Lecture notes, Lab Tasks.
- D3 graph gallery for inspiration (link)