Data Science Mini-Project 2023/24 - Individual Reflective Report Rory Bennett – 22 May 2024

**Summary:**

I contributed to approximately 35% of the overall project effort. The contributions were primarily from three members. My contributions were spread across coding, analysis, writing, and organising. I attended 15/19 group meetings, missing 4 timetabled sessions in weeks 14, 21, 23 and 24. This is illustrated by the “Attendance by Meeting Type and Project Week” graph below.

For the written report, I wrote half of the Data Description/Preparation section as well as the entirety of the RFM sections in the Methodology and Results and Discussion sections. Including general grammatical and structural editing across the whole report, my contributions equated to roughly 1/3 of the report effort. Furthermore, I gave 2/5 of the oral formative and summative presentations.

I had the most contributions to GitHub of any of my group members and consistently communicated in our WhatsApp and Microsoft Teams chats to organise meetings or discuss the project in general.

In addition to this information, I have attached my weekly activity logs.

A graph of a number of people

Description automatically generated with medium confidence

**GitHub Details**

I was predominantly active on GitHub, making 59% of the total commits for my group during the project. I added Python and Jupyter Notebook scripts which ran through EDA and RFM analysis, forming the basis of our research. I also set up and managed our group repository and Kanban board, allocating tasks and progressing them through the stages of completion upon consultation with my peers. I completed 6/12 of the tasks set on the Kanban board, 2 individually and 4 in collaboration with 1 or more group member.

The below visual titled “Rory’s GitHub Activity” details the number of commits made by me during each project week. The below visual without a title details the number of completed project tasks that each group member contributed to. For clarity, “Amber-Lord” is Riqui Sheng and “wierdman125” is Saket Vishwas Mokashi.

A graph with different colored rectangles

Description automatically generated

**Weekly Activity Log**

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| **Week** | **Topic** | **Notes** |
| **15** | Individual tasks: | EDA using Python, set up group project repository on GitHub, organised group meeting, researching financial crime trends as a potential direction for the report. |
| Collaborative tasks: | Delegating preliminary research and coding tasks to each group member. |
| Challenges: | GitHub setup, exploring a large dataset. |
| **16** | Individual tasks: | RFM analysis using Python. |
| Collaborative tasks: | Discussing preliminary research and coding findings as a group to decide direction of research. |
| Challenges: | Continuing with EDA with a focus on what insights we can draw from our data (notably assumptions that the underlying simulation has made). |
| **17** | Individual tasks: | Created PowerPoint for formative assessment. |
| Collaborative tasks: | Started writing the summative report in Overleaf. |
| Challenges: | Improving clarity of RFM visuals and producing useful tools for further analysis. |
| **18** | Individual tasks: | Updated RFM code by producing separate visuals for each element, adding one function which calculates a score for a specific customer at an exact date and one to discern whether a customer has spent more recently than the average customer. |
| Collaborative tasks: | Online team meeting with Yunhua to review progress, discussed appropriate information to include in presentation and report. |
| Challenges: | Pushing updated code to GitHub, learning how to write a report using Overleaf, refining the information that we should include in our presentation. |
| **19** | Individual tasks: | Drafting and rehearsing my parts of the formative presentation |
| Collaborative tasks: | Online and in-person meetings, continuing to draft and rehearse our formative presentation. |
| Challenges: | Ensuring that the presentation is concise and informative within the 5 minutes allowed. |
| **20** | Individual tasks: | Finalising and presenting my parts of the formative presentation, researching into push-payment fraud as an alternative angle beyond the formative presentation. |
| Collaborative tasks: | Online meeting and formative oral presentation. Finalised and presented our initial research to LBG employees and University staff members. |
| Challenges: | Ensuring that presentation documents are submitted in the correct format so that all visuals can be displayed, changing the colour of some visuals to cater to audiences who are colour-blind, keeping to time. |
| **21** | Individual tasks: | Beginning RFM analysis of second dataset. |
| Collaborative tasks: | Beginning EDA of second dataset. |
| Challenges: | Exploring new dataset, understanding, and considering the additional variables in our analysis. |
| **Vacation** | Individual tasks: | Continuing with RFM analysis of second dataset. |
|  | Collaborative tasks: | Online meeting to discuss the progress of the final report and presentation. |
|  | Challenges: | Continuing to find literature concerning the use of RFM in drawing inferences from transactional datasets. |
| **22** | Individual tasks: | Finding some relevant literature and writing RFM section of the Methodology section in the report. |
| Collaborative tasks: | In-person meeting, discussing literature that we had found and progress of the final report. |
| Challenges: | Working with tables and graphs in Overleaf to display them in the correct areas of the report. |
| **23** | Individual tasks: | Completing RFM analysis of second dataset and drafting the summative presentation |
|  | Collaborative tasks: | Writing the Data Description/Preparation section of the report to include RFM and EDA details. |
|  | Challenges: | Had a septoplasty so was in a lot of pain and struggled with energy levels to contribute. Deciding on a project title |
| **24** | Individual tasks: | Writing the RFM sections in the Methodology and Results and Discussion sections and conducting general grammatical and structural editing across the whole report. |
|  | Collaborative tasks: | Online meeting to discuss rescheduling the presentation and finalising the report. |
|  | Challenges: | Ensuring that our report delivered a coherent message, was well structured and included all of our relevant work. |
| **26** | Individual tasks: | Rehearsing my parts of the summative presentation. |
|  | Collaborative tasks: | In-person meeting to rehearse our presentation in preparation for the summative oral presentation later in the week. |
|  | Challenges: | Controlling nerves and presenting with confidence and conciseness. |