**Homework Week 2**

This week’s homework will be purely Project based. You need to work as a group and the homework will be submitted by one of the members of your group. List the other members of your group in the document, so that your instructor can mark every student.

**Question 1 [20 points]**

What is your project question(s) and the problem it tackles?

* You will be marked on how realistic the problem is given the project timeline, as well as the fit with the subjects covered throughout the Data Specialisation and your personal, common interests in the topic.

How does TikTok trends affect artists ‘ popularity on Spotify?

Our project aims to analyse the effect that “going viral” on TikTok may have for the success of the song (and its respective artist) on Spotify. We would like to know if TikTok would be a good platform for music artists to use and popularised their songs. Additionally, this project may uncover new potential relationships on user’s behaviour across these two different platforms.

**Question 2 [20 points]**

Explain your target audience. Who could be interested in reading your final report and for whom will your project be useful? Assess the level of expertise in relation to data science of your audience (for example, how technical should your report/presentation be?).

* You will be marked on correctly identifying your audience and the technical level of your presentation and report.

target audience- spotify, tiktok, and advertisers. This will include business and marketing staff who do not have data science expertise, so the visualisations would need to be clear, simple, and easily readable.

**Question 3 [30 points]**

What data sources will you need to answer your project question(s)? Describe any potential issues you can have with the datasets and how will you overcome this:

* For example, will the data you find only cover particular geographical areas? Will you need to combine multiple datasets to overcome this?

We will collect data using TikTok and Spotify APIs. These API's will provide us with information about the music being played in the videos and their visualisations. Spotify API will provide us with information about the songs and the artists. We will link TikTok data and Spotify data using information from Roblox database for the music IDs.

Spotify for developers : <https://developer.spotify.com/documentation/web-api/reference/get-information-about-the-users-current-playback>

Tiktok

<https://developers.tiktok.com/doc/research-api-specs-query-videos/>

Roblox music code for Tiktok

<https://robloxsong.com/>

**Question 4 [30 points]**

Describe the team approach to the project work:

* **how are you planning to distribute the workload and how are you planning to work on your project**: agile working - We will hold weekly brief meetings where the team can share progress updates, discuss any obstacles, and plan our work for the week. The focus would be on collaboration, identifying and resolving issues while maintaining a shared understanding of the project’s status. Do introduction and conclusion of the project last.
* **what are your team’s strengths and weaknesses**;

| **Strengths** | **Weaknesses** |
| --- | --- |
| Varied skills set coming from each of the members of the group that will help us stay in track and organise work accordingly | Given that each of the participants have different working commitments, it may be difficult to find times when all members can attend meetings. We need to make sure that all members’ involvement in the project is balanced. |
| Good communication skills | working completely online without face-to-face meetings |
| Team spirit |  |
| Resilience and inquisitive minds |  |
| Shared interest in the topic (music and social media) |  |

* **how are you managing your code**:

The code will be managed using a version control software. We will use Github for the purpose of this project.

* **include an expected timeline of the project**: The expected timeline for this project is 3 weeks. Attached below is a Gantt-chart that contains a breakdown of the processes involved in our project.

| **Week** | **Date** | **Kaban** | **Sarah** | **Wei** | **Man** | **Eziamaka** | **Esther** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1 (early week) | 08/05/2023 | * Agreeing on project topic * Finalising HW2 | | | | | |
| 1 | 08/05/2023 | Working on how to extract data from Spotify | Working on how to extract data from TikTok | Working on how to extract data from Spotify | Working on how to extract data from TikTok | Working on how to extract data from Spotify | Working on how to extract data from TikTok |
| 2 (early week) | 15/05/2023 | * Quick meeting to summarise work done over the week and highlight any issues encountered * Collectively think about the code that we need to link datasets * Document used code (draft implementation and execution section) | | | | | |
| 2 | 15/05/2023 | Data analysis | Data analysis | Data analysis | Data analysis | Data analysis | Data analysis |
| 3 (early werk) | 22/05/2023 | * Summary of findings * Agree on adequate visualisations * Draft introduction and conclusion sections | | | | | |
| 3 | 22/05/2023 | Cleaning -up visualisations and final report | Cleaning -up visualisations and final report | Cleaning -up visualisations and final report | Cleaning -up visualisations and final report | Cleaning -up visualisations and final report | Cleaning -up visualisations and final report |