Project Name: Track Tales
Team name: Audible Algorithms
Team Members: Mia Patrikios, Lena Young, Shipra Patel

Section 1: Introduction

The developed project will use the Spotify API to organize a user's playlist into a data graphic. The visualization will break down their listening data to show top songs by genre, artists, albums, and songs. Track Tales would allow Spotify users to visualize and discover insights into their music preferences.

The motivation behind this project is to create a more user-friendly interface to view listening stats. There is a similar feature available to Spotify members, but it is only available at the end of the year and it requires a premium subscription. Additionally, the insights it shows are very generic by only showing top artists, most listened-to songs, etc. Track Tales would expand on the listener's stats, showing in-depth customized data visualizations. The user would be able to navigate through all of their data, rather than getting to see limited, generic insights.

In the context of the market, users would be able to share their stats with their friends and on social media. Additionally, it would not require them to wait until the end of the year, as they would be able to use the program anytime they wanted. People are always looking to expand their music interests and learn more about themselves. Track Tales would allow them to visualize the data in an intuitive way, and learn more about what kind of music they prefer.

Section 2: Customer Value

The primary customers of Track Tales are younger Spotify users, roughly ages 10-25. This Software provides Spotify users with an insightful experience where they can visualize their music listening. Because music is such a self-expressive form of entertainment, by being able to see what kind of music they like the most, they will be able to learn more about themselves. By gaining these insights, it will help them find more music and explore similar artists.

The main issue this software intends to solve is the availability of music data visualization. Many music platforms offer yearly music insights, but they are not customized or available at any other time. Additionally, many of the existing solutions are more of a slideshow view of the most generic stats, not allowing the user to delve into more niche data. To gauge user approval, the team will either implement a rating system or test the software with other

users. The success of Track Tales will be based on the metric of user satisfaction with viewable data insights and user experience.

Section 3: Proposed Solution & Technology

The software will use Spotify's API to get a user's liked songs playlist. It will parse the JSON data and submit it to MongoDB to organize it. The data will be used to visualize the user's liked songs broken down by genre, album, artist, and song. The main components of the system are API calls, MongoDB, and Plotly/Pandas for data visualization. The team will use Python and Flask for the backend development, Spotify for the API calls, Pandas/Plotly for data visualization, and HTML/CSS for the front end.

The minimum value of this implementation would be capable of paring the JSON data and providing the Mongo database their playlist breakdown. The target implementation should feature a visually appealing front end and possibly an option to get music recommendations based on what category of the data graphic you are in to valuably enhance the customer's experience.

Section 4: Team

Regarding the team's programming background, Lena has worked mainly in C++ and has brief experience with Python. She is looking to develop front-end skills and gain more experience with developing user interfaces. Mia has previously worked with Plotly and Pandas for data visualization. She also has experience in team management which will be useful for sprint planning. Shipra has worked with Java, C++, and Python before and is eager to learn new skills. She will leverage her knowledge on the front end side, contributing logical and analytical skills.

Section 5: Project Management

The completion of the system is feasible in one semester. The team will meet once every other week to discuss the project. Each member will have sprints designated to them, which will need to be completed or in progress by the time the group meets again. We plan on rotating roles throughout the semester as project manager, front-end developer, and back-end developer. If the full implementation of this project will not be able to be completed due to time restrictions, a satisfactory program will involve a well-developed user interface with limited data visualizations.

The development of Track Tales does not anticipate any legal, regulatory, or ethical concerns. The team will have access to the data needed through personal Spotify accounts and when users log in with their Spotify account.