

# Business Analytics – Final Project Proposal

---

## Team Members

May Chang, Christina Terranova, and Angely Lee

## Project Title

Spotify: Operation Popularity

## Type of Final Project

Project type 1: build a spreadsheet-based decision support tool to address some class of business analytic problem, incorporating some of the modeling and data analysis concepts from class.

## Executive Summary of the Proposed Project

Our project will revolve around leveraging a comprehensive Spotify dataset to provide valuable insights for artists and listeners. It will be a tool to help artists search what kind of songs are trending and which factors play a role in their popularity or success. By analyzing trends and factors contributing to the success of songs, we hope to empower artists to create meaningful music that resonates with their audiences. In addition, we hope listeners will also be able to discover a variety of songs based on their interests.

## Target Users or Analysis Consumers

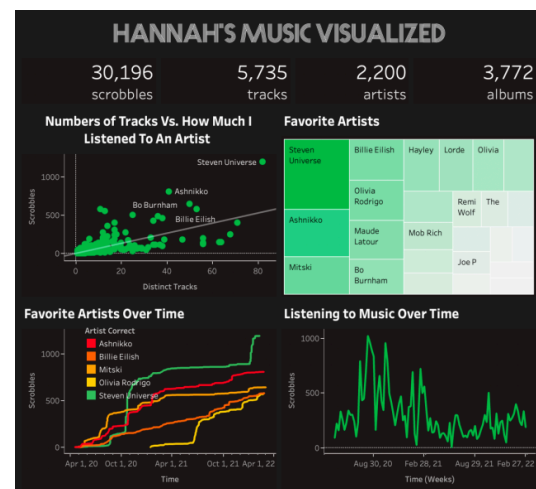
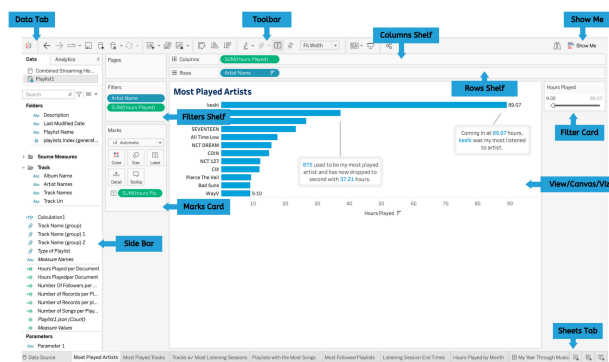
This project targets artists by analyzing data to determine what factors influence a song's success, this will then allow these artists to understand what they could focus on in their music to create songs well-received by the general public and build in popularity.

## Technical Summary

The primary platform we plan to use is Tableau to create an interactive visualization dashboard which would include some content-based filtering and regression analysis to depict trends. The application has a very user-friendly interface that allows us to create visually appealing and insightful visualizations.

Excel will also be utilized to store the raw data and to do some data crunching with the use of Pivot Tables. Charts with dynamic ranges would be a good presentation as well to show regressions over time. Using VBA programming is also an idea we have in mind. This can help with data importing, cleaning, and formatting.

Below are two models that depict what we have in mind for the project using Tableau.



## Data Needs and Sources

Extensive data is needed to answer the topic of our project which is to determine the factors that influence a song's success. Kaggle is a site that provides various types of datasets and after searching the dataset, [Top Spotify Songs](#) is an excellent source in answering this question.

The tentative backup plan, if data acquisition for the Spotify dataset ends up being a problem, is to modify the Kaggle dataset by omitting columns or rows with missing data in them for a more accurate analysis. Another backup plan is to search for another dataset about the characteristics of popular songs.

## Anticipated Benefits to Target Audience

We foresee several benefits from the successful completion of our project. From a user's perspective, one of our potential target audiences, musical artists, could use our Tableau dashboard to observe what factors may influence a song to become popular. The dashboard could also show useful information about user data that could also be useful to marketing professionals. Additionally, listeners on Spotify

also can benefit by seeing interesting information about the user experience on Spotify, such as how certain artists gain popularity over time, or potential reasons behind their favorite artists' success.

## Anticipated Challenges

The biggest challenge to anticipate with any data analytics project is working with the dataset. The data we choose must be reliable and have enough factors that can be used to analyze the information we would like to see. We must create models that work and accurately convey what we are trying to show, as well as clean and analyze the data. Creating the design of the models we end up choosing will be difficult as well, along with ensuring that they work correctly. For example, deciphering the most influential factors that impact the popularity of a song can be difficult, because it can be multiple due to multiple reasons, but one reason may carry more weight than others. It will also be difficult to choose which factors we would like to portray over others since there will be many to choose from given the large dataset that we chose.

## Personal Learning Objectives

We hope to achieve the following objectives:

- Reach a deeper level of utilizing the tools in Tableau including its use of graphs and dashboards.
- Enhance data visualization skills: insightful and interactive visualizations that effectively communicate findings.
- Explore Excel tools and the many formulas learned in class to decipher our chosen dataset.
- Gain more insight into the aspects of Spotify and the factors that contribute to the works of artists' music and its success.

## Closing Thoughts

This project will analyze what factors make a song popular; therefore, equipping current and aspiring artists with knowledge on the foundation of building a good song while customizing it to their musical style. The foundation of creating music may be the same; however, the execution will depend on the artist and allow for the creation of an array of diverse music. Not only will our tool cater to artists, but it also targets listeners who are interested in discovering more than what and who's on their current playlist.

If the Spotify dataset is unsatisfactory we were thinking of this Movie Rating dataset as a potential substitute for the final project. Listed below are the dataset link and project-type ideas:

### [Movie Rating Dataset](#)

Type 1: Create a tool that would present a list of movies to a person based on their interest (e.g. genre) in descending order of the movie's overall popularity

Type 2: develop an optimization tool that would help a company figure out the budget for a movie based on predicted popularity for the highest profit