Introduction to Story:

We chose to use Tableau to visualize and present the findings from our project. We created three dashboards to tell the story. First dashboard is an overall summary in total of the data, the second allows the user to drill into the data by decade and the third provides detail information about the different features.

Dashboard 1

Here is an overview of the total data set. As you can see over the six decades there were over 20,000 popular songs which was approximately 50% of the total.

The chart at the bottom left is a histogram created from our machine learning model that showing the significance of the different measured. Instrumentalness was the most significant followed by acousticsness, danceability and energy for the top four. We have indicated their scores at the top as our KPIs.

The chart at the bottom right provides the information by decade with the bars being the number of popular songs and the lines representing the average score of each of the four most significant features. While the average scores for Instrumentalness (brown) and danceability (yellow) have stayed relatively flat across the decades, energy (red) and accousticness (blue) have change significantly with energy scores going up and accousticness scores going down.

Dashboard 2

This dashboard provides the same information as the previous dashboard but can be used to drill down to get the KPI information for each decade. The **sixties** had the highest number of popular songs with 4,321, the following decades declining until the **nineties** which had the fewest popular songs of only 2,670 before starting to increase again with there being over 3000 in **2010**.

Dashboard 3

Finally, for this last dashboard we thought it might be interesting to compare the scores of popular songs to the non-popular songs for each of the measures features to see how they changed over time.

Here you can see that the **accousticness** scores for the popular songs and non-popular songs have followed the same general trend with the popular songs scores for accoustiness being lower than the non-popular songs. Many of the features tend to follow the same general direction.

However, **Instrumentalness,** our most significant, which was flat over all so that in comparison the non-popular song scores are increasing over time while the popular songs instrumentalness scores are decreasing.

A couple of other features I found interesting in doing these comparisons were **duration**, which shows that popular songs in the 60s were shorter, under 3 minutes, than the non-popular songs, at 3.5 minutes, then in the nineties the popular songs at almost 4.5 minutes were slightly longer than the non-popular songs and in 2010 it is back to the popular songs being shorter than the non-popular songs, both being almost a minute longer than the songs in the 60s.

And finally, the **Speechiness** feature where the popular songs have a significant lower speechiness score in the sixties than the non-popular songs, but in 2010 that appeared to have flipped with the popular songs speechiness sores being higher than the non-popular songs by almost the same margin.

I will turn it back over to Amela to wrap it up.