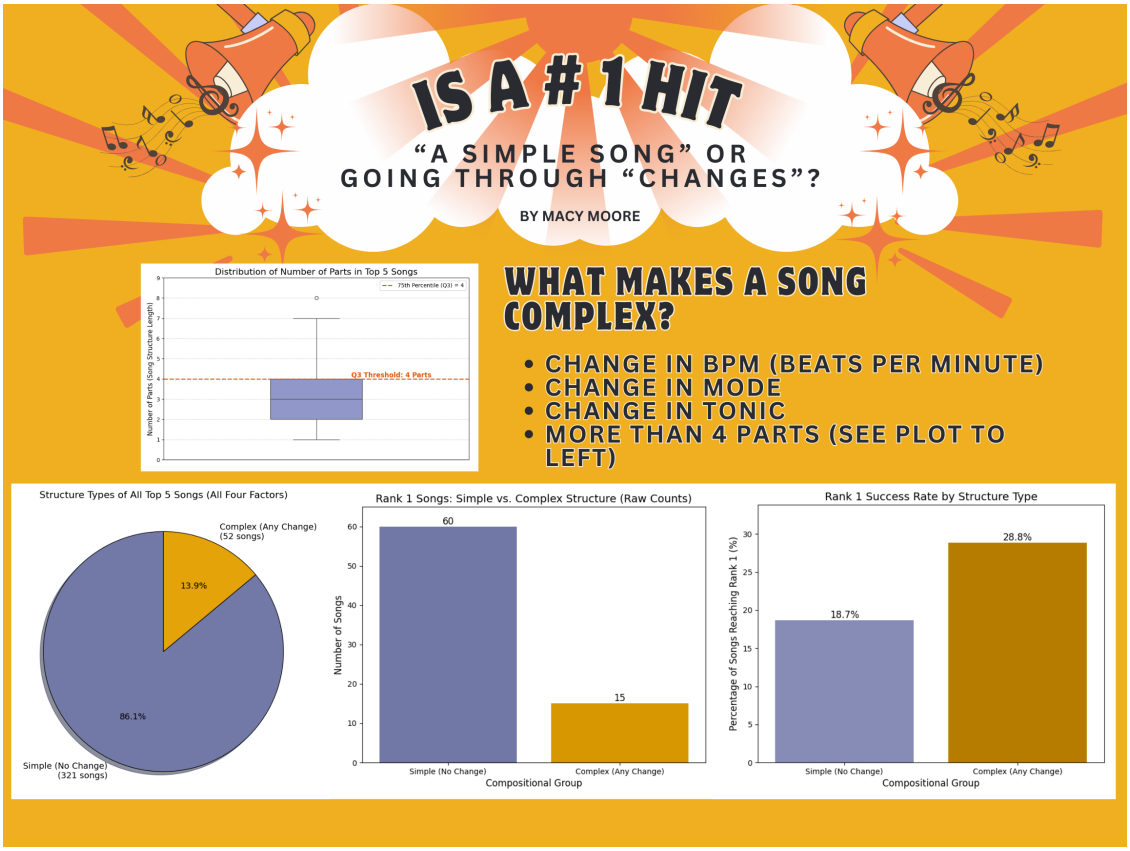
FinalProduct

December 13, 2025

1 Is a #1 Hit "A Simple Song" or Going Through "Changes"?



2 Description

This infographic compares the success of simple songs and complex songs to determine whether the presence of change within songs influenced their Billboard ranking. The Billboard Melodic Music Dataset, used to explore this question, includes the top 5 songs from each year between 1950 and 2022 along with their BPM (beats per minute), mode, tonic, and number of parts. If there was more than one tempo or a key change listed for a song, this was also included in the dataset. The 75th percentile of songs have 4 or less parts, meaning that having more than 4 parts causes a particular song to undergo more changes than others. A song was categorized as "complex" if it exhibited change in BPM, tonic, mode, or had more than 4 parts. Across the 72 years that this data was collected, 321 of the top five songs were simple and only 52 were complex. This explains why

more simple songs occupied the number one position over songs that included changes. Calculating a Rank 1 Success Rate was necessary to compare the success of each structure group fairly. This rate, employed in the rightmost bar graph, is the percentage of each structure group's total Top 5 songs that reached the #1 position, removing the bias of the overall prevalence of simple songs. Despite the greater number of simple songs charting in the top 5, there is a higher percentage of top-five complex songs that reach #1 than that of simple songs. Therefore, if a more complex song ranked the top five, it historically had a greater probability of occupying the highest ranking slot.

3 Resources Used

Resource Name	Description	Type	Link
The Billboard Melodic Music Dataset (BiMMuDa)	Dataset containing top songs and their features.	The original source is a pdf, but the actual file employed in this analysis is 'bimmuda_per_song_full.csv'. Instructions on how to access the csv file can be found in EstablishingData.ipynb.	https://transactions.ismir.net/articles/
'EstablishingData.ipynb	Notebook for loading the dataset and explaining its source so that others may understand its structure and features.	Notebook	Established Data
'ExploringData.ipynb'	Notebook of initial visualizations as the data was explored. This file also includes the four charts included in the final infographic.	Notebook	Explored Data
Canva	Website used for infographic creation and organization of visualizations coded in Establishing-Data.ipynb. I modified a free template from this website to make my infographic.	Website	https://www.canva.com/design/DAG6C3mY/J-y4–t7p-tGE2p3L-gL4Q/edit

Resource Name	Description	Type	Link
Paper Storyboard	Initial sketch of infographic to organize visualizations based on their relevance to the overall conclusion.	Image/Artifact	Paper Storyboard Photo
Canva Workspace	This is what I used to upload images of my visualizations and make my infographic.	Image/Artifact	Canva Workspace Photo