

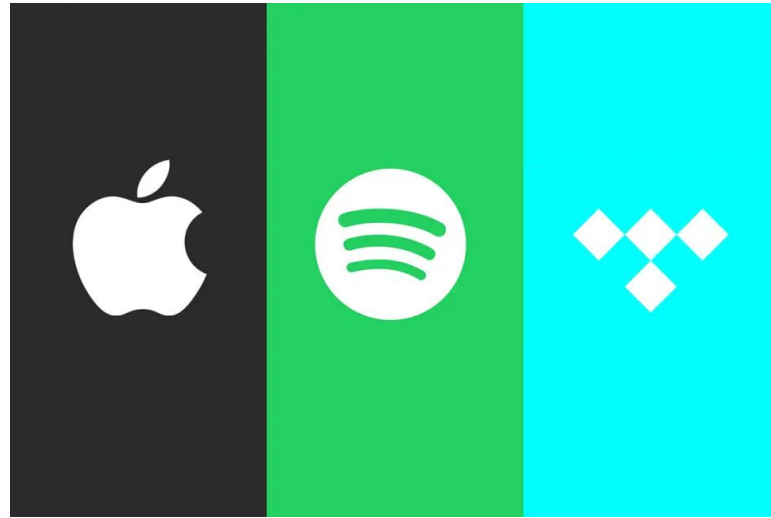


# Music Streaming Wars: Predicting the Next Popular Songs

E. Berke Tezcan



Why is it important to predict which songs are going to be popular in the future?



## Objectives & Data Analysis



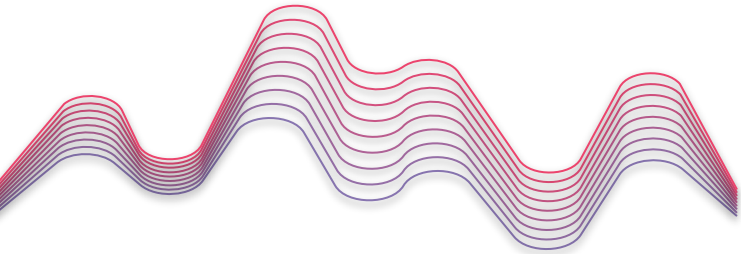
- **Objective:** Provide 3 insights into what makes a song popular or not
- **Goal:** Increase the competitive advantage of Spotify
- Sample size of 232,725 tracks
- Data from 2019

## Popular = ?

- Popularity scores = # of recent plays
- Popularity scores of songs on Spotify's Top 100 tracks playlist
- Minimum score was 58
- Popular = Top 100 worthy



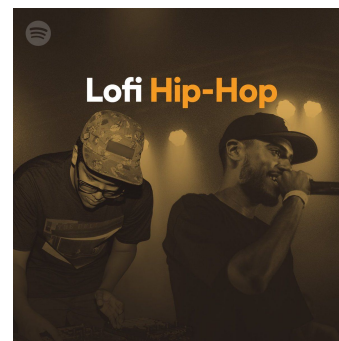
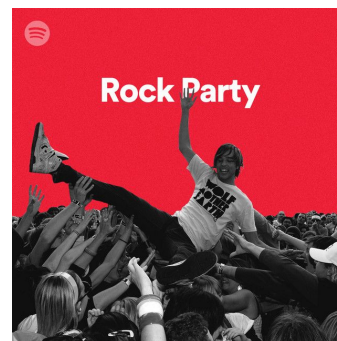
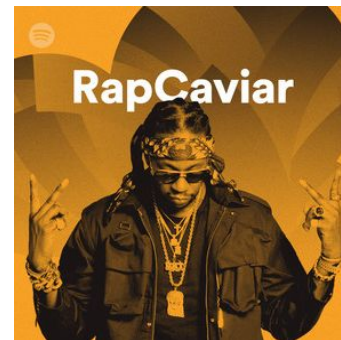
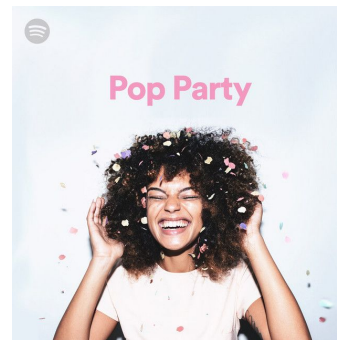
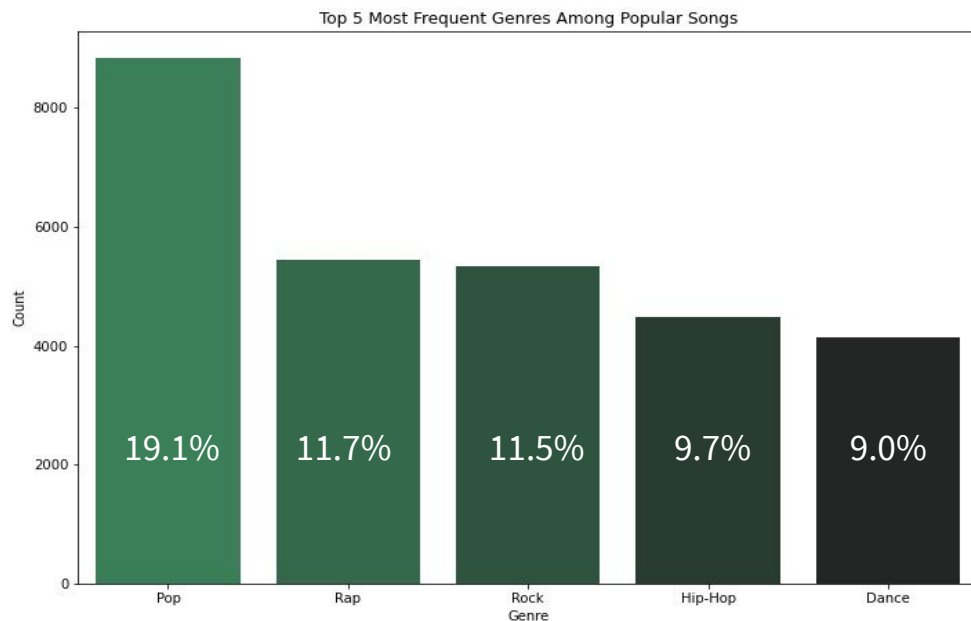
What were some of the most important attributes of a song?





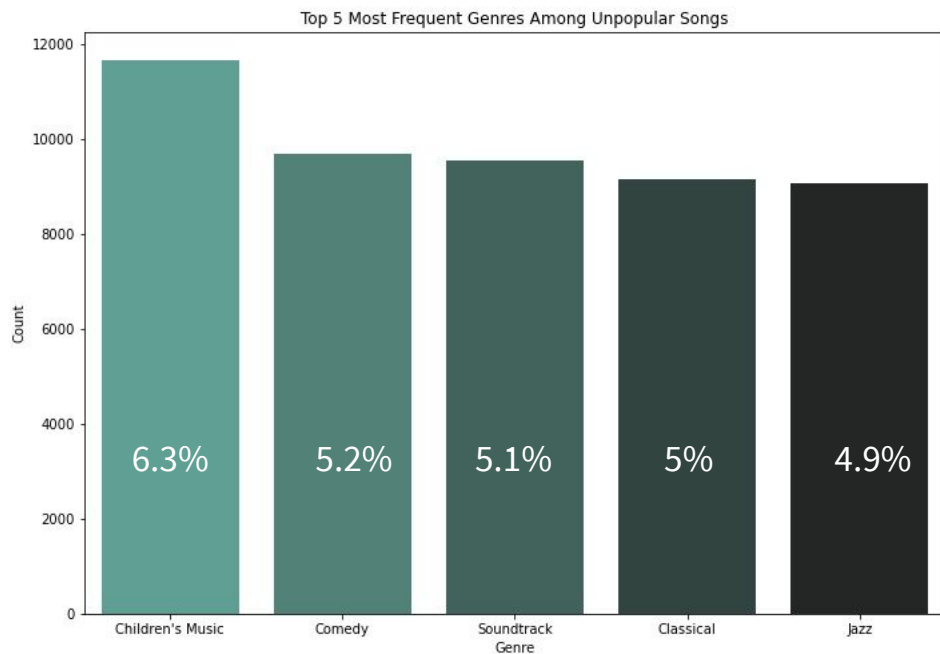
**Genre**

# Top 5 Genres within Popular Songs

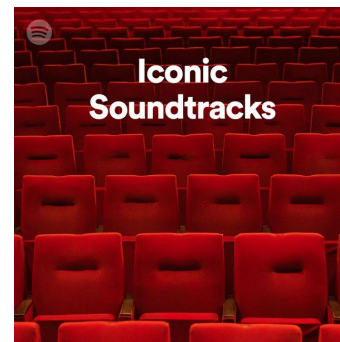
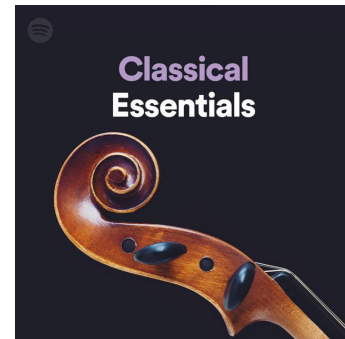
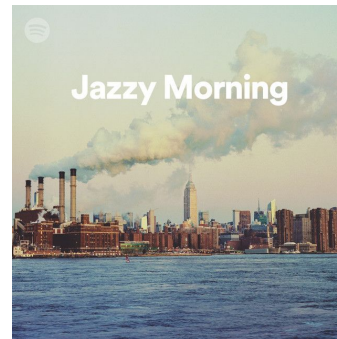


These account for 61% of all popular songs

# Top 5 Genres within Unpopular Songs



These account for 26.5% of all unpopular songs






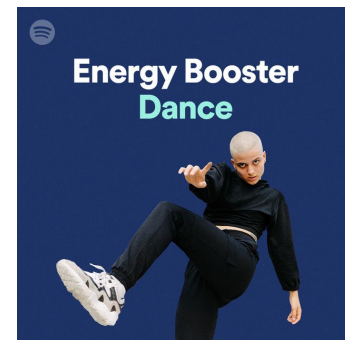
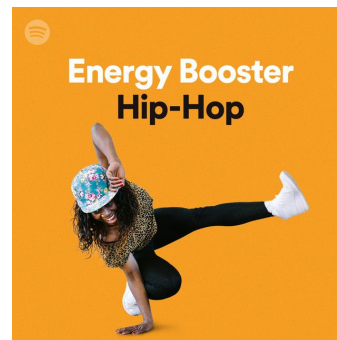
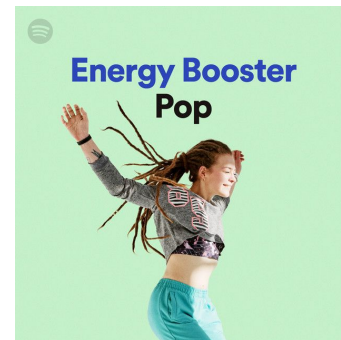
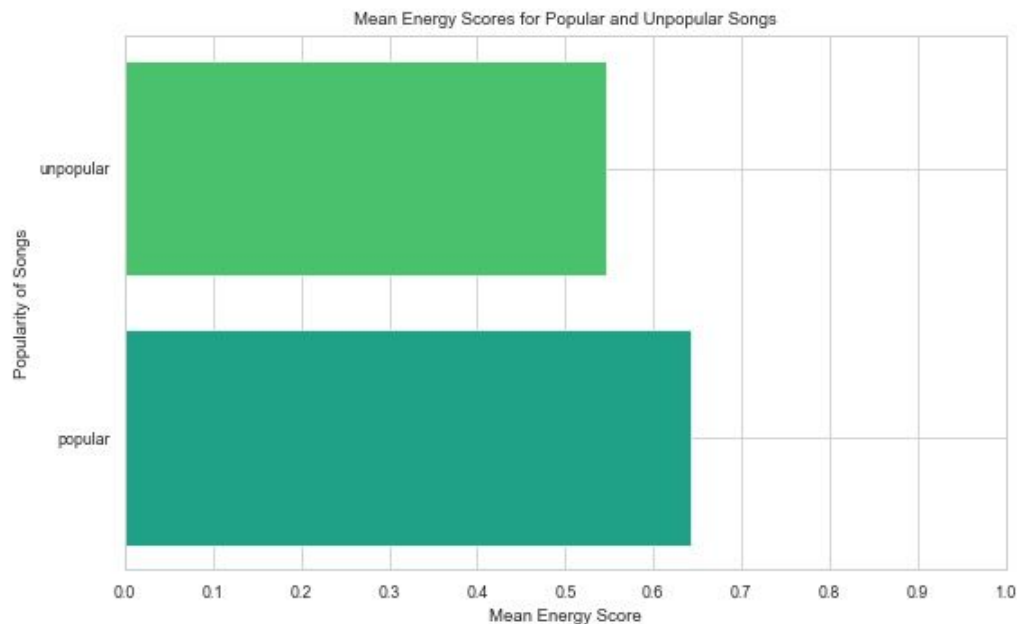


# Energy

*A perceptual measure of intensity and activity. Typically, energetic tracks feel fast, loud, and noisy.*




# Energy Scores of Songs by Popularity



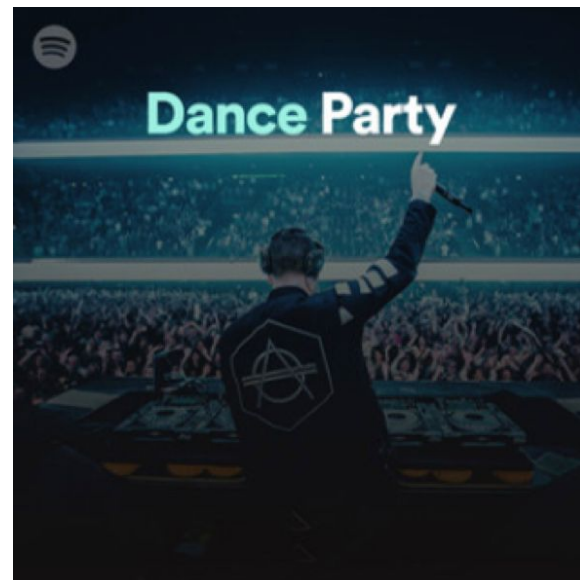
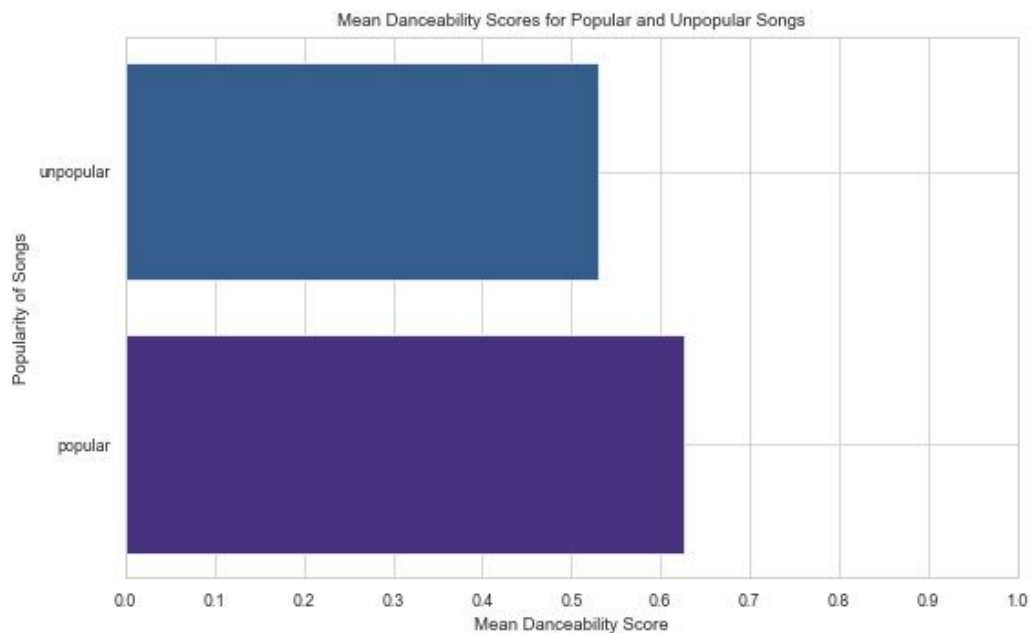
A decorative network diagram in the top-left corner, featuring a complex web of interconnected nodes and lines. The nodes are represented by small circles, some of which are larger and have concentric circles, while others are smaller. The lines are thin and gray, connecting the nodes in a non-linear fashion. The overall structure is dense and organic, resembling a molecular or biological network.

# Danceability

*How suitable a track is for dancing based on a combination of musical elements including tempo, rhythm stability, beat strength, and overall regularity.*

A decorative network diagram in the bottom-right corner, similar to the one in the top-left. It features a complex web of interconnected nodes and lines. The nodes are represented by small circles, some of which are larger and have concentric circles, while others are smaller. The lines are thin and gray, connecting the nodes in a non-linear fashion. The overall structure is dense and organic, resembling a molecular or biological network.

# Danceability Scores of Songs by Popularity



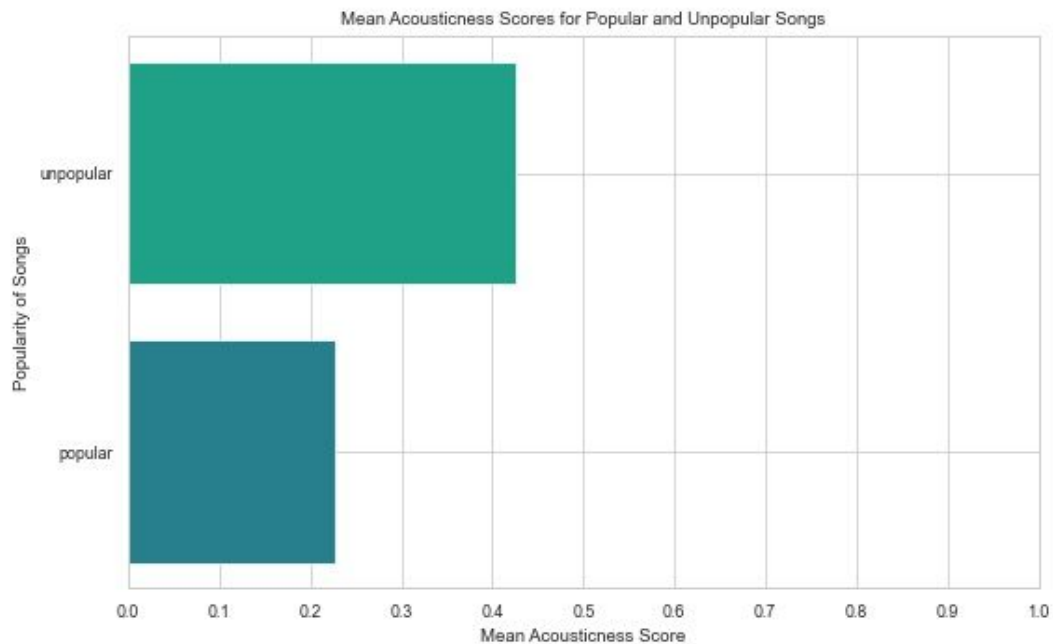
A decorative network diagram in the top-left corner, featuring a complex web of interconnected nodes and lines. The nodes are represented by small circles, some of which are larger and have concentric rings, suggesting a hierarchical or multi-layered structure. The lines are thin and gray, connecting the nodes in a non-linear fashion.

# Acousticness

*A measure of how much a song is electrically enhanced or modified.*

A decorative network diagram in the bottom-right corner, similar to the one in the top-left. It consists of a cluster of nodes connected by lines, with some nodes being larger and having concentric rings, indicating a similar hierarchical or multi-layered structure.

# Acousticness Scores of Songs by Popularity



## Conclusions

- Popular songs tend to have Pop, Rap, Rock, Hip-Hop and Dance as their genres.
- More niche genres such as Children's Music, Comedy, Soundtracks, Classical and Jazz were more frequent among unpopular songs.
- Generally, popular songs are higher energy, danceable, and less acoustic.



A decorative network diagram in the top-left corner, featuring a complex web of interconnected nodes and lines. The nodes are represented by small circles, some of which are larger and have concentric rings, suggesting a hierarchical or central structure. The lines are thin and grey, connecting the nodes in a non-linear fashion.

# Thank you!

For more information [berketezcan@gmail.com](mailto:berketezcan@gmail.com) or GitHub: [ebtezcan](#)

A decorative network diagram in the bottom-right corner, similar to the one in the top-left. It shows a cluster of nodes connected by lines, with some nodes being larger and more prominent than others, creating a sense of depth and connectivity.



## Images from:

- <https://static.standard.co.uk/s3fs-public/thumbnails/image/2015/06/30/15/apple-music-spotify-tidal.jpg?width=968&auto=webp&quality=75&crop=968%3A645%2Csmart>
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