

SPOTIFY

The popularity Analysis

Denise Okur

Andrew King

Johan Ehrhardt

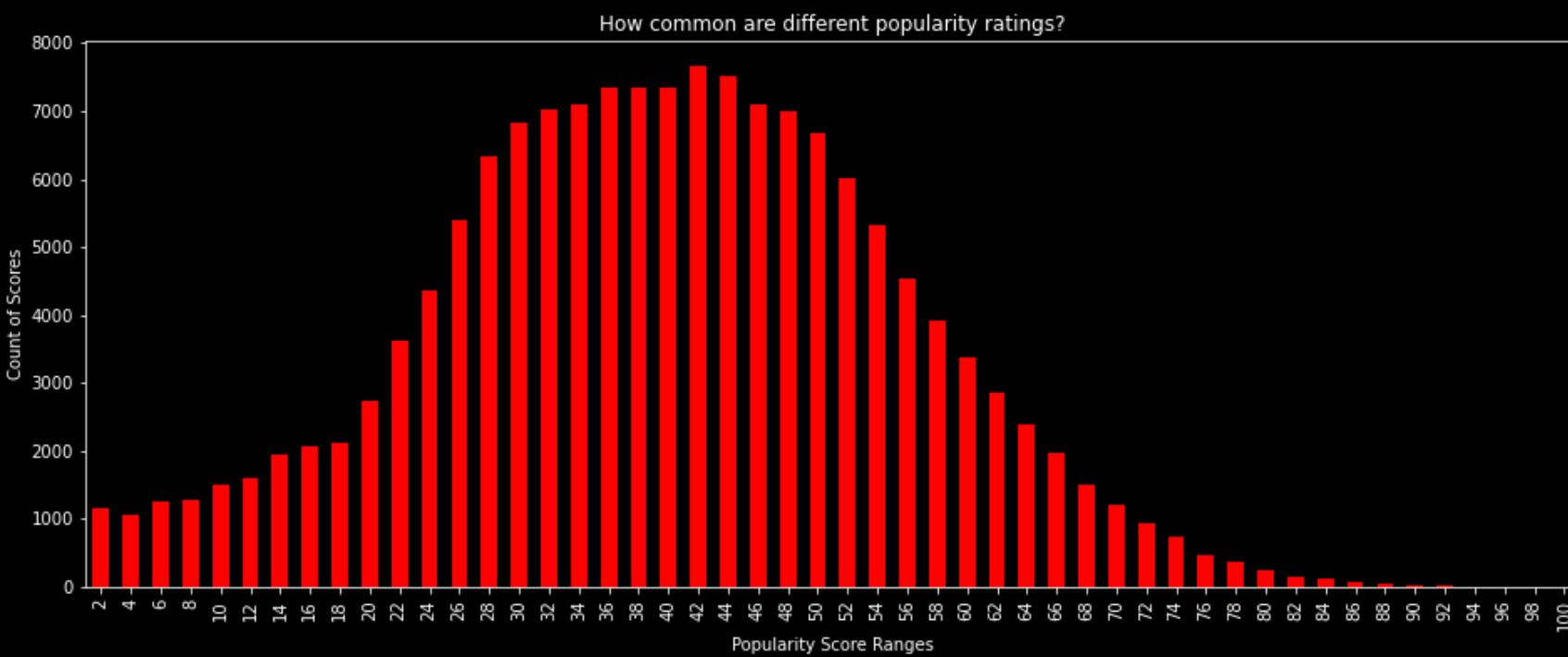
Data Set

- ❖ It has 232,725 songs
- ❖ It has been presented with 26 genres with around 10,000 tracks per each category.
- ❖ The Data Set also is presenting acousticness, danceability, duration, energy, instrumentalness, key, liveness, loudness, mode, speechiness, tempo, time and valence.

Cleaning Process of the Data Set

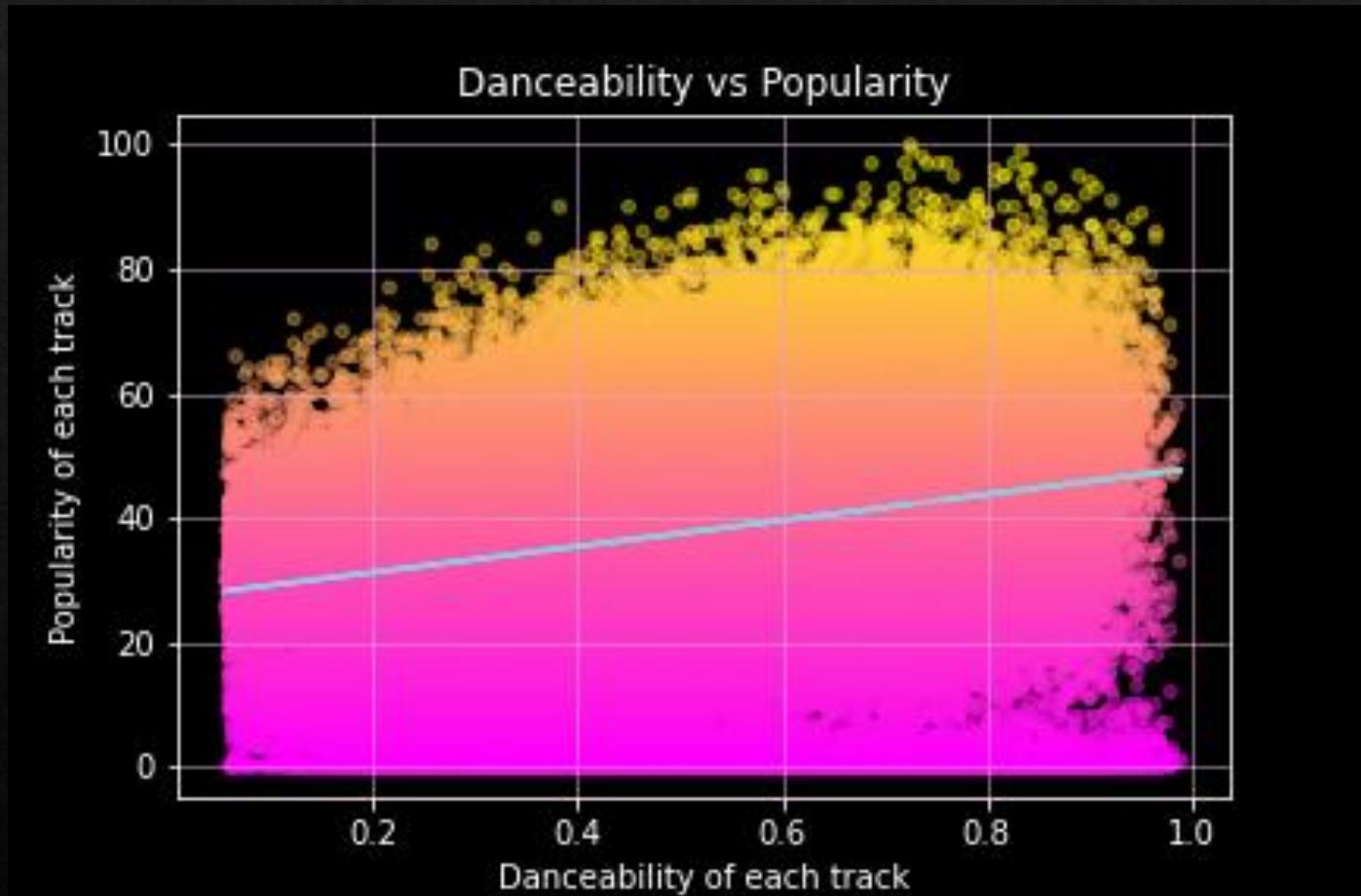
- ❖ Rename and clean up all columns in the data frame
- ❖ Remove duplicate versions of tracks, except keeping the first
- ❖ Drop the Track ID, Duration, Key, Liveness, Tempo, Time Signature and Mode columns because they won't be used in analysis
- ❖ Remove all comedy and then movies from our data, as these have an unrepresentatively high level of 'speechiness'

Popularity Count



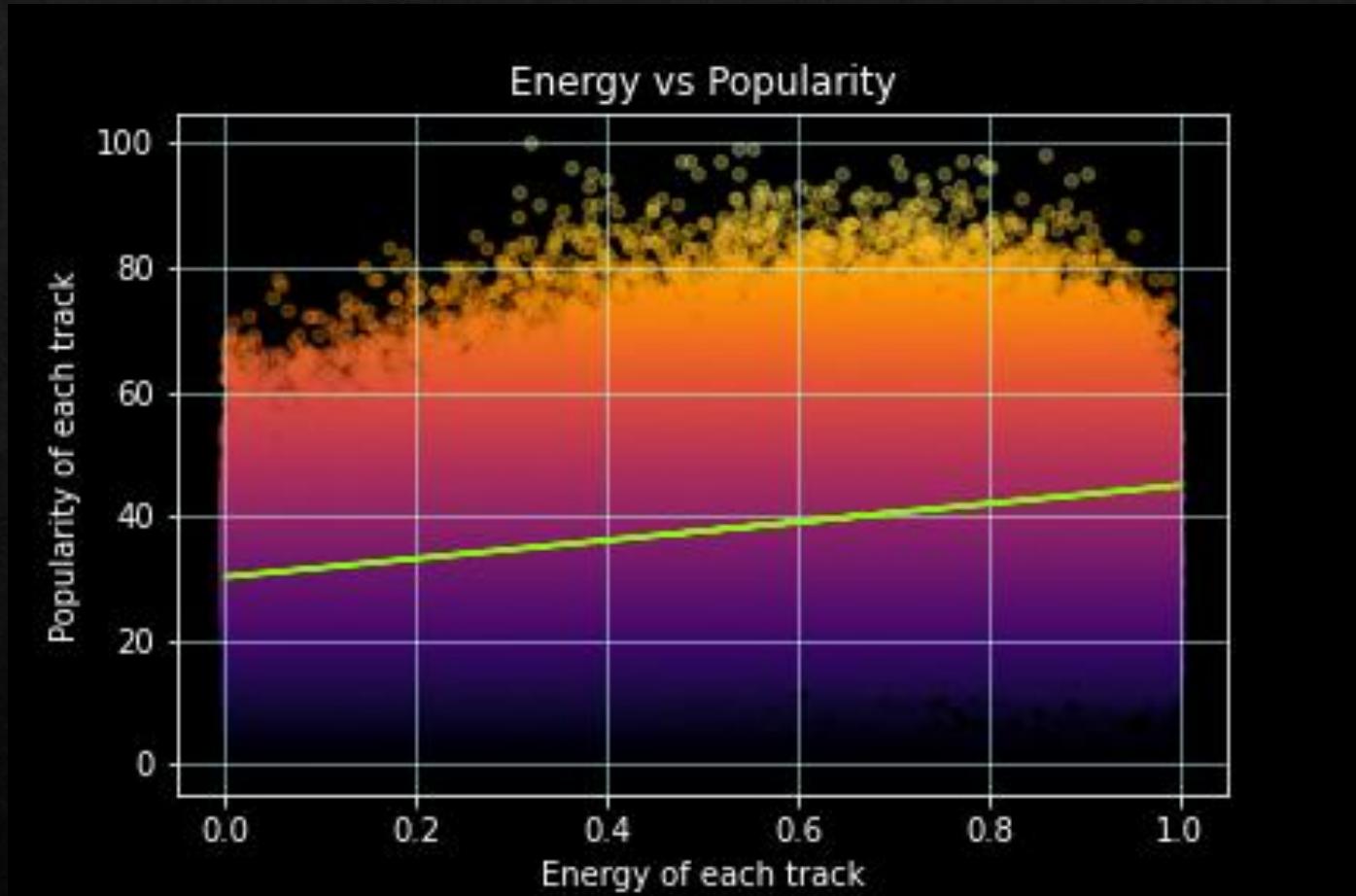
What Drives Popularity in Music On Spotify?

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



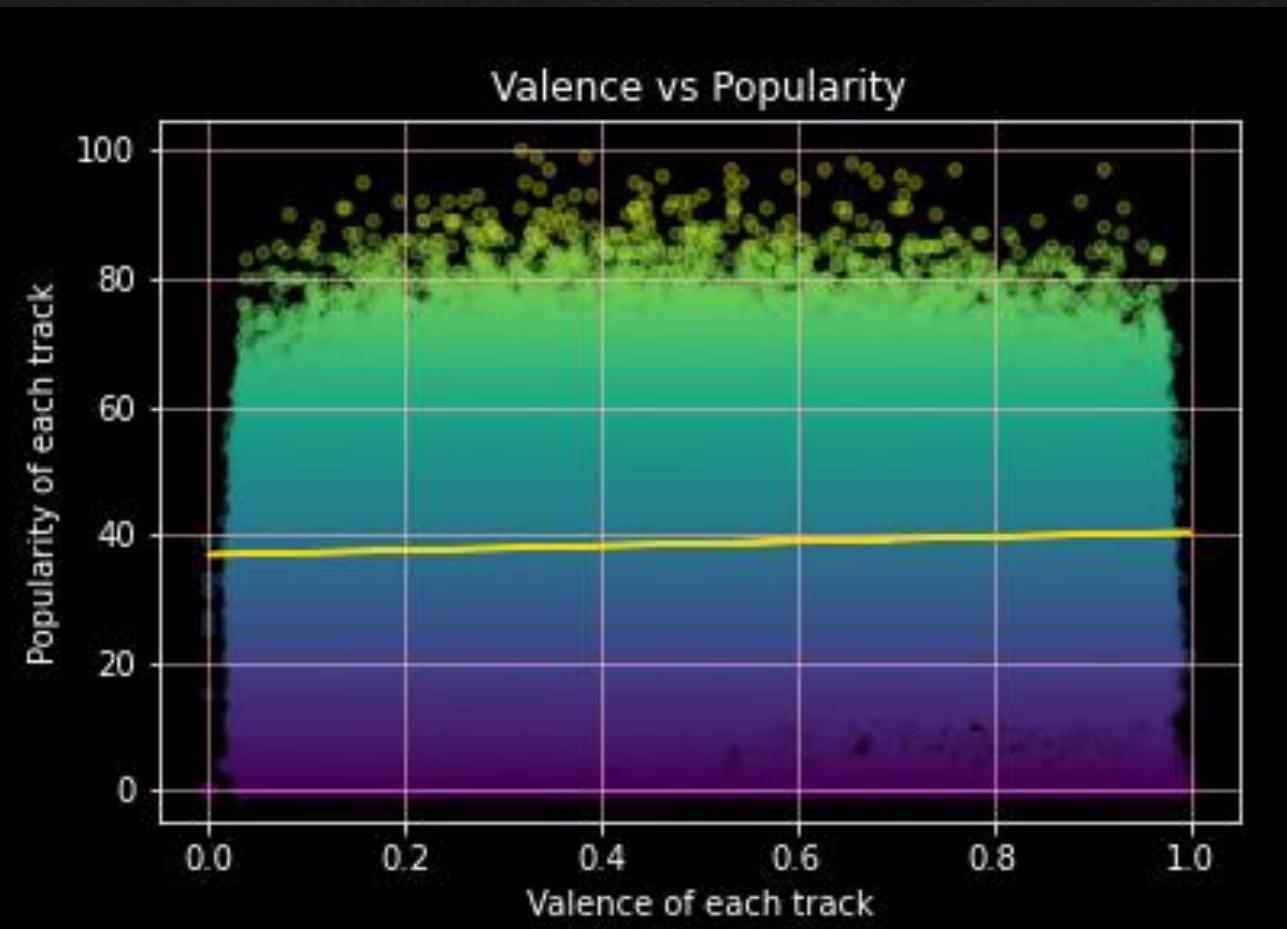
What Drives Popularity in Music On Spotify?

".... a perceptual measure of intensity and activity. Typically, energetic tracks feel fast, loud, and noisy."

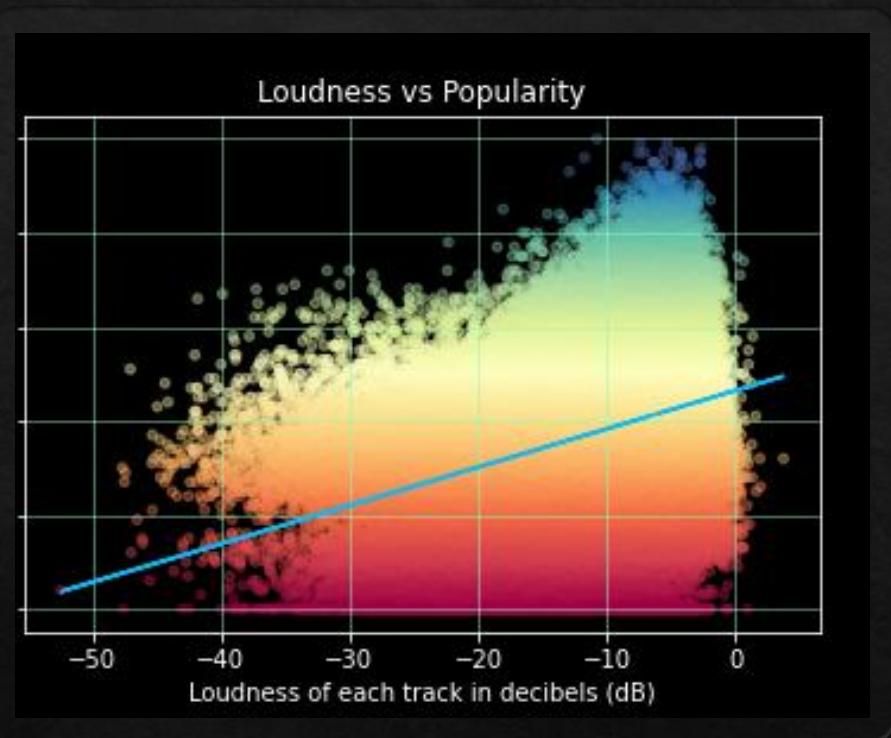


What Drives Popularity in Music On Spotify?

"....the musical positiveness conveyed by a track. Tracks with high valence sound more positive (e.g. happy, cheerful, euphoric), while tracks with low valence sound more negative (e.g. sad, depressed, angry)."

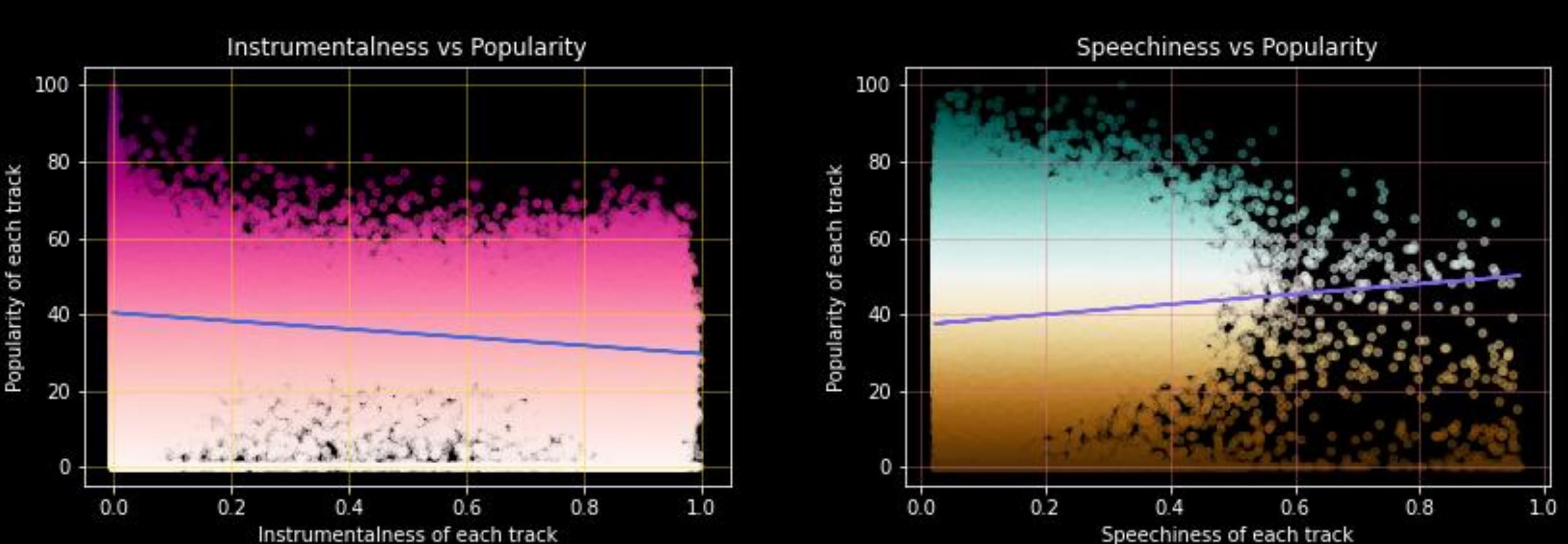


What is it about music we love?



$$y = 0.82x + 46.44$$

Coefficient = 0.32



$$y = -10.71x + 40.34$$

Coefficient = -0.21

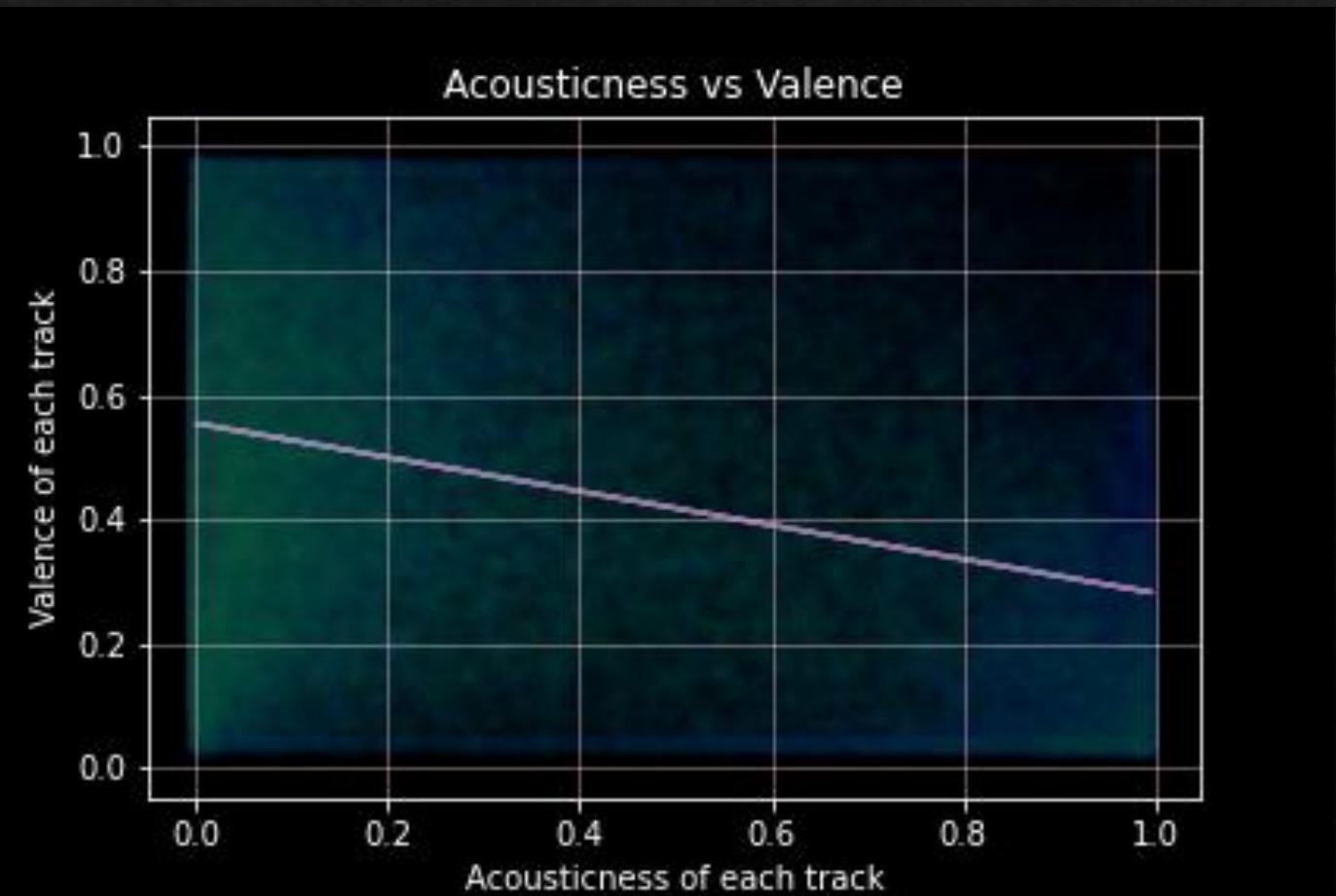
$$y = 13.35x + 37.24$$

Coefficient = 0.07

Behind the music's structure

There is more to music

This shows that the acoustic tracks tend highly towards being giving off a somber and low valence feel.

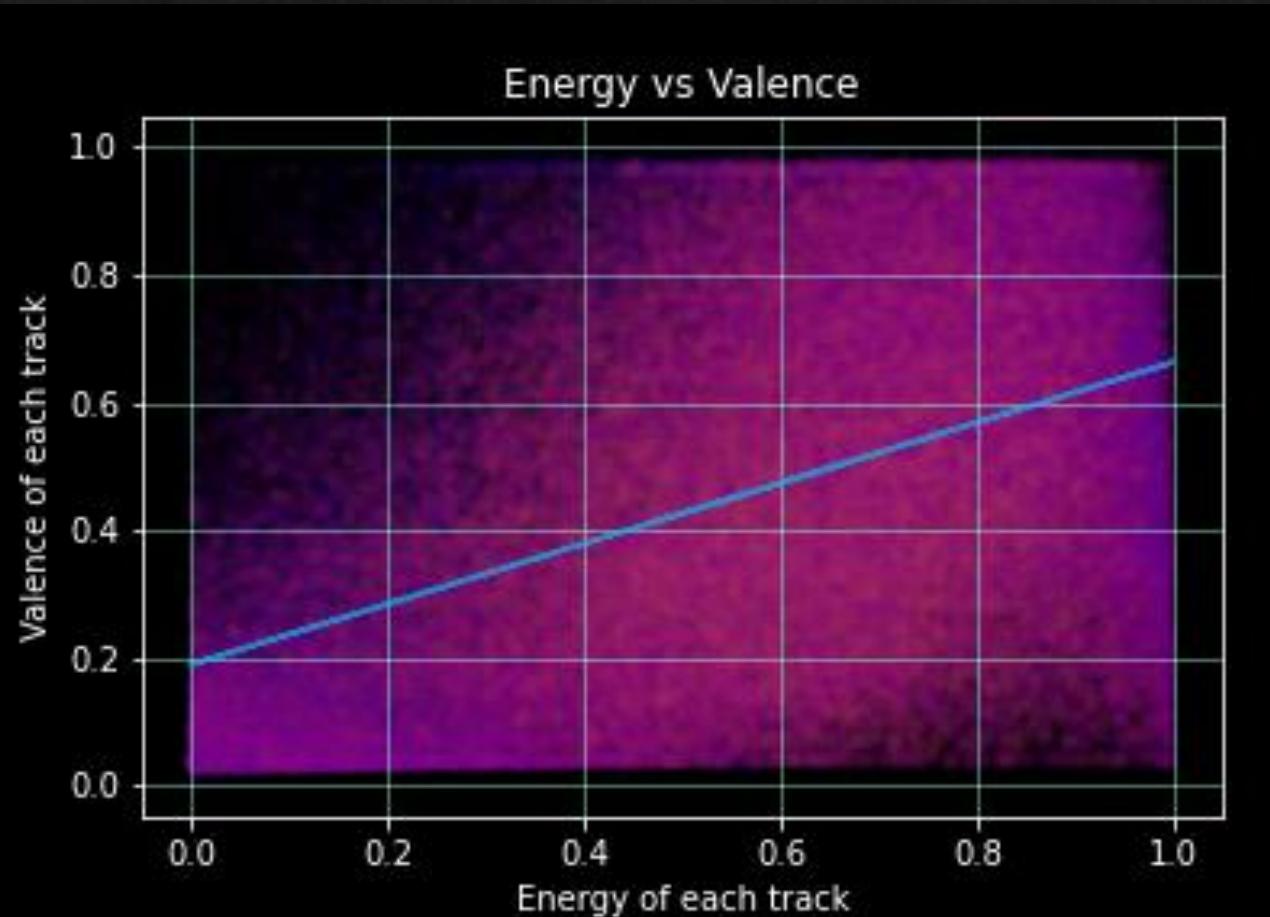


$$y = -0.27x + 0.55$$

Coefficient = -0.36

There is more to music

- ❖ We can conclude that the high energy of a track does tend to make us feel positive emotions.
- ❖ Our vision of the breadth of music was limited.



Conclusions

- ❖ Danceability, energy, loudness and valence have shown less correlation than popular intuition would have assumed.
- ❖ Another common intuition for the majority would be that popular music has a high valence. The relationship plotted here between popularity and valence resulting in such a meager correlation of .06 seems quite astonishing too.
- ❖ Popular assumption has been around a high correlation between Energy and valance. Whilst, our analysis has shown one of the strongest correlations from our results, popularity in music derives from more emotions merely the positive.

THANK YOU