

How to Make Hit Songs Based on Spotify Top 50



Research Question

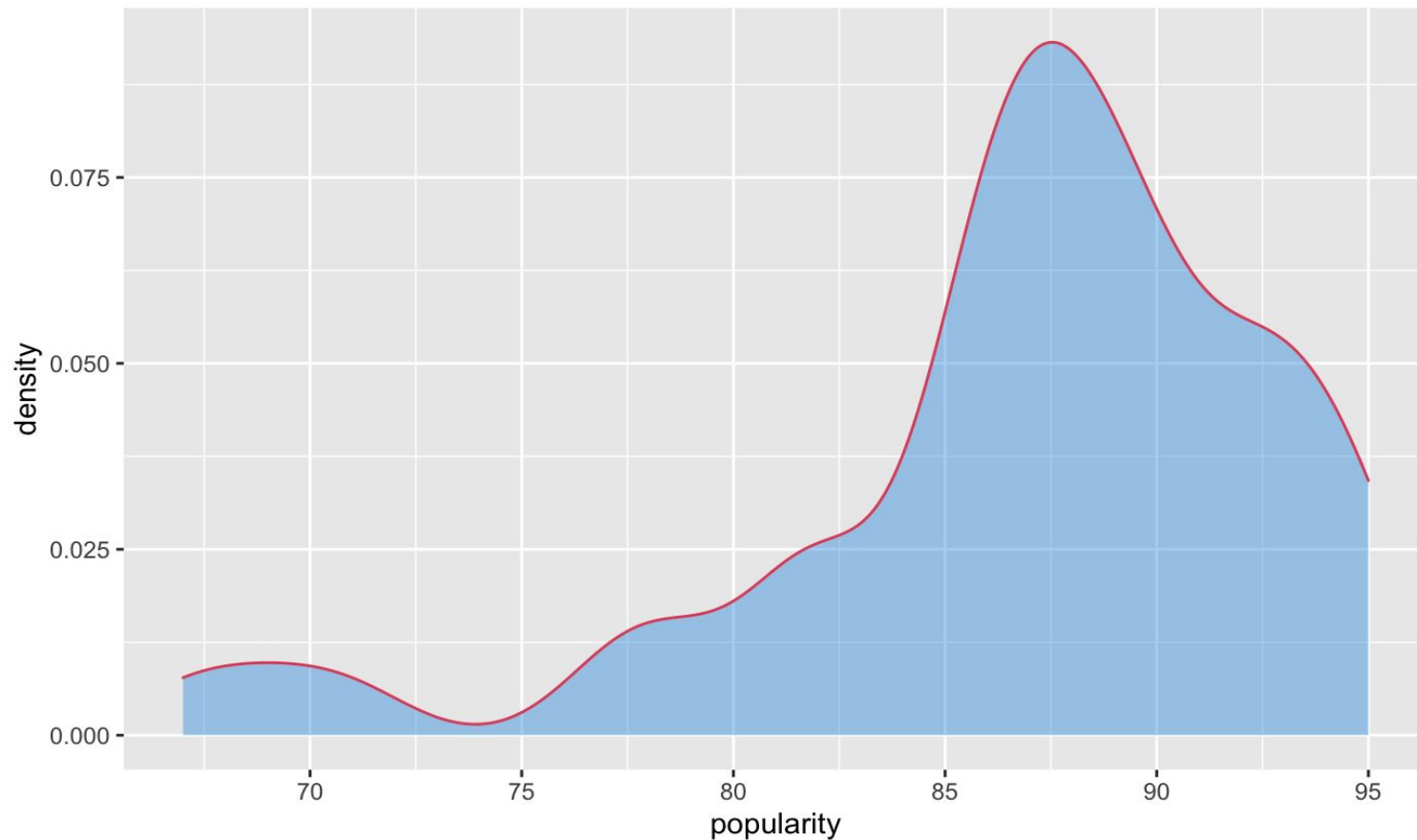


Does popular music has formula?

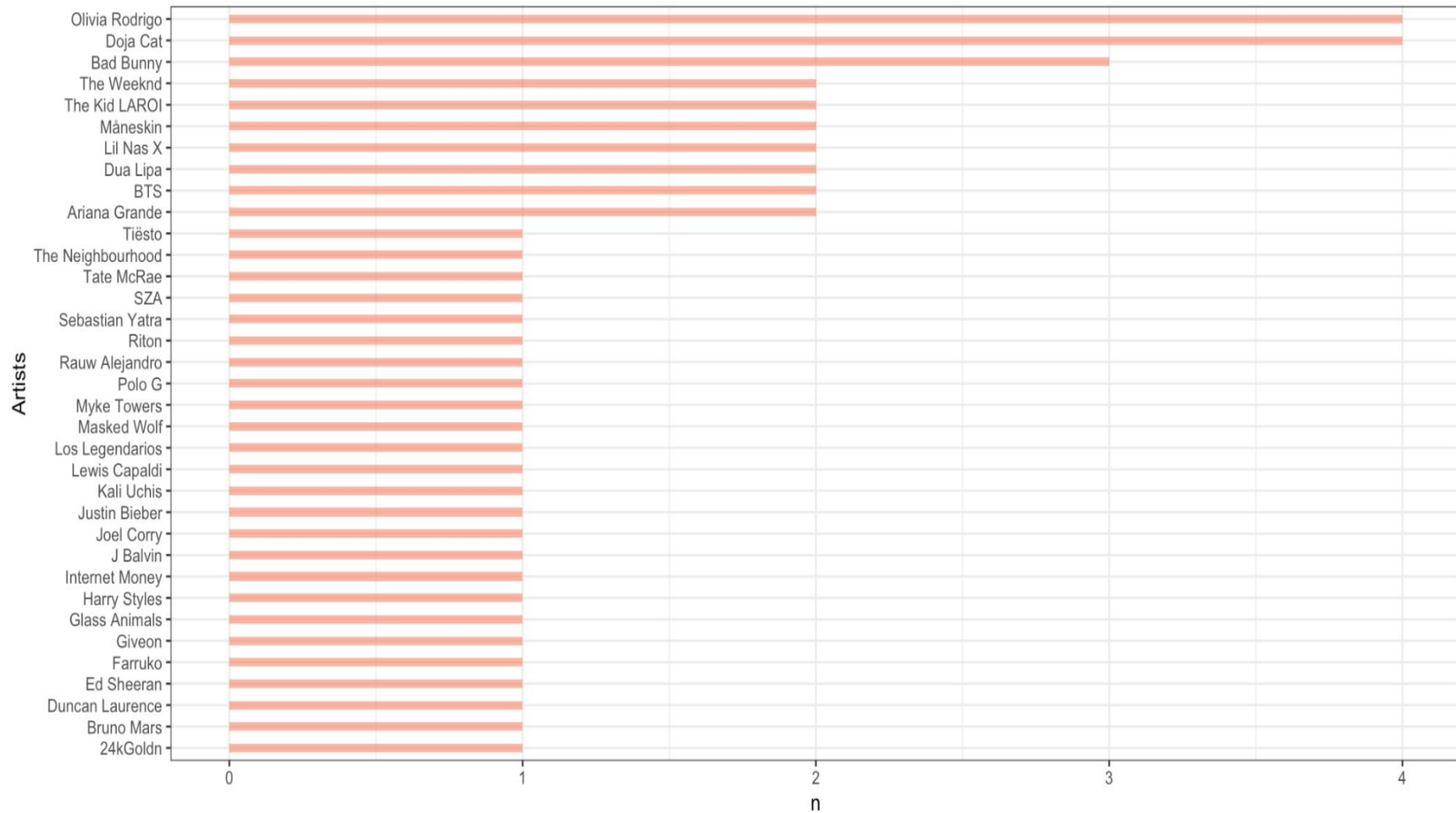


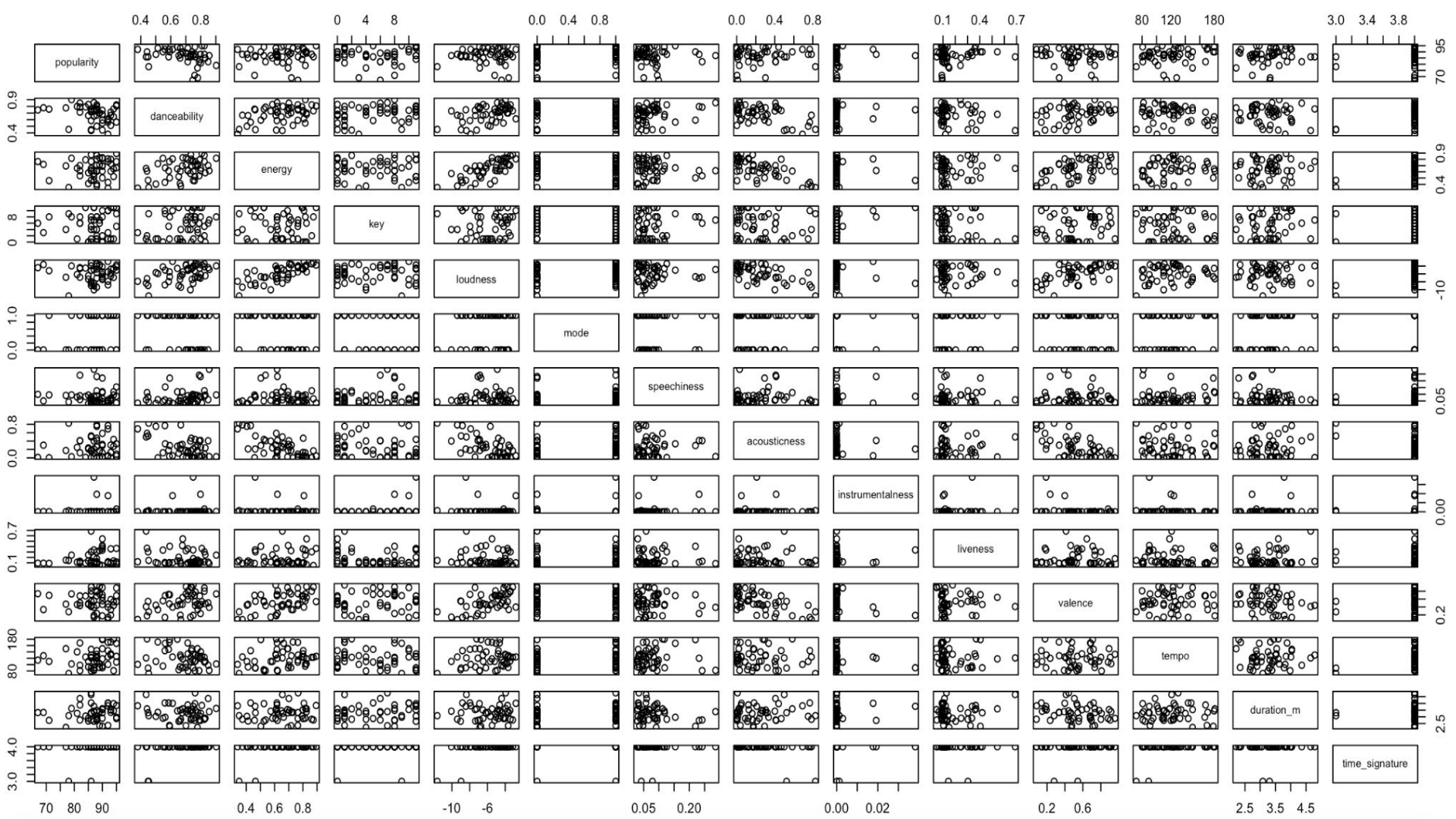
How to make songs hit on Spotify?

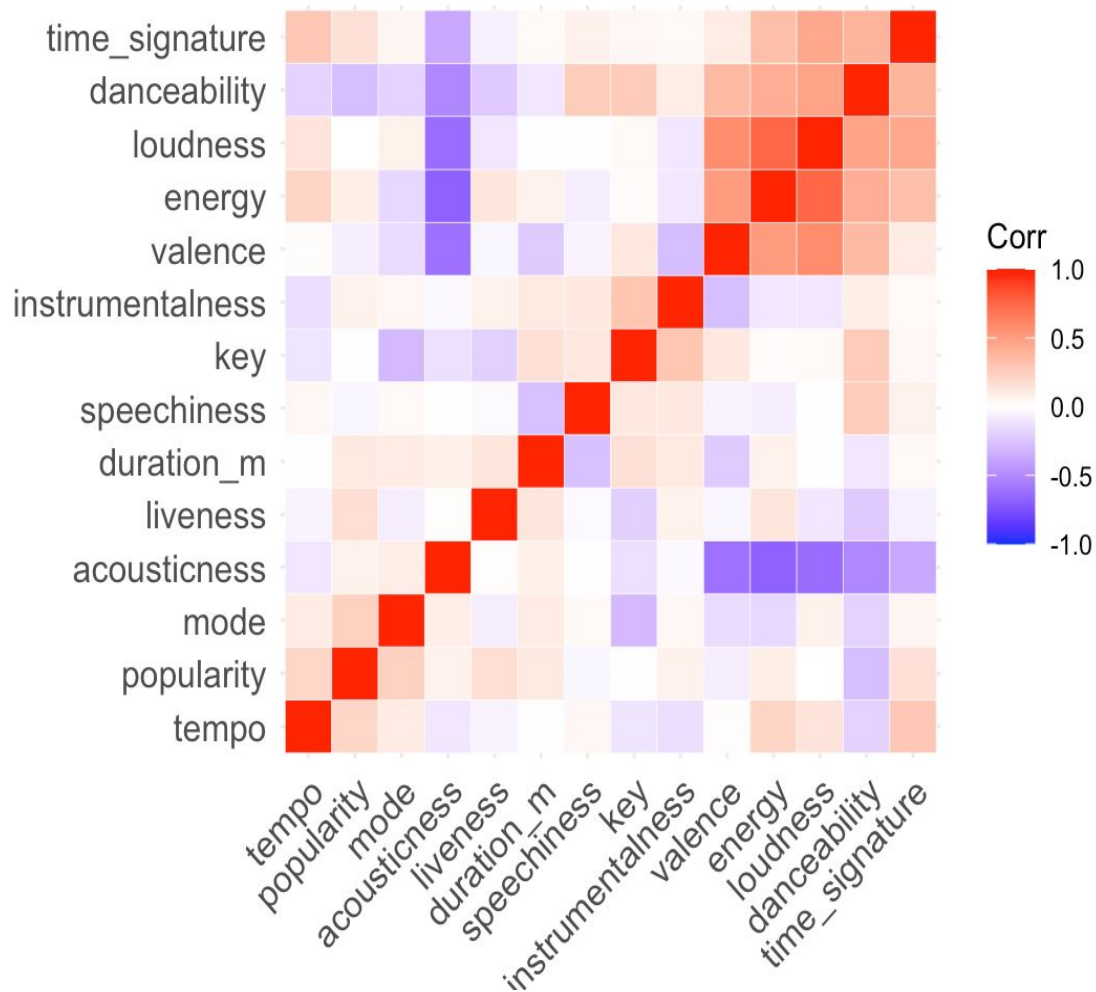
The Spotify Popularity Index is a 0-to-100 score that ranks how popular an artist is relative to other artists on Spotify.



Top 50 hits artists







- Energy and Loudness have the highest correlation.
- Loudness, Valence and Energy have positive correlation.



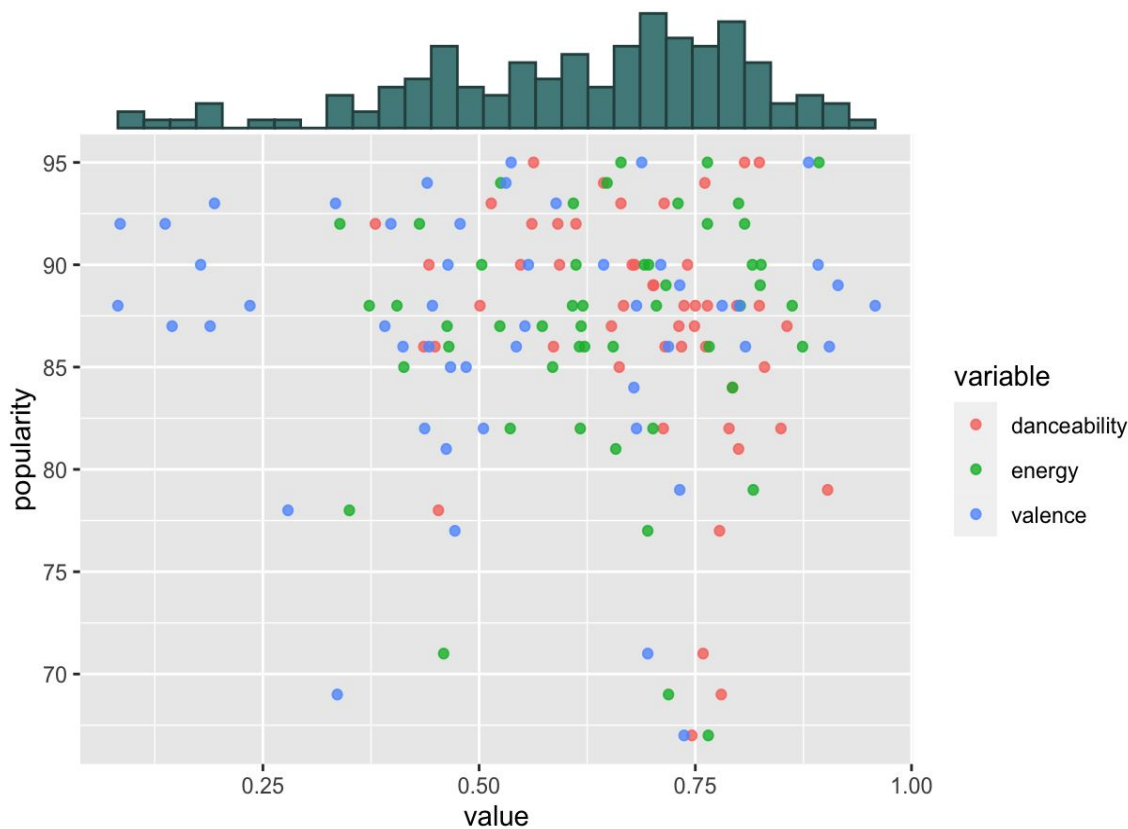
- Energy and Acousticness have a highly-correlated inverse relationship
- Acousticness, Valence, Energy, and Loudness have inverse relationship



- Popularity' has very poor correlation values across independent variables.
- R-squared : 0.28
- P-Value : 0.37

Grouped Features Analysis





Danceability

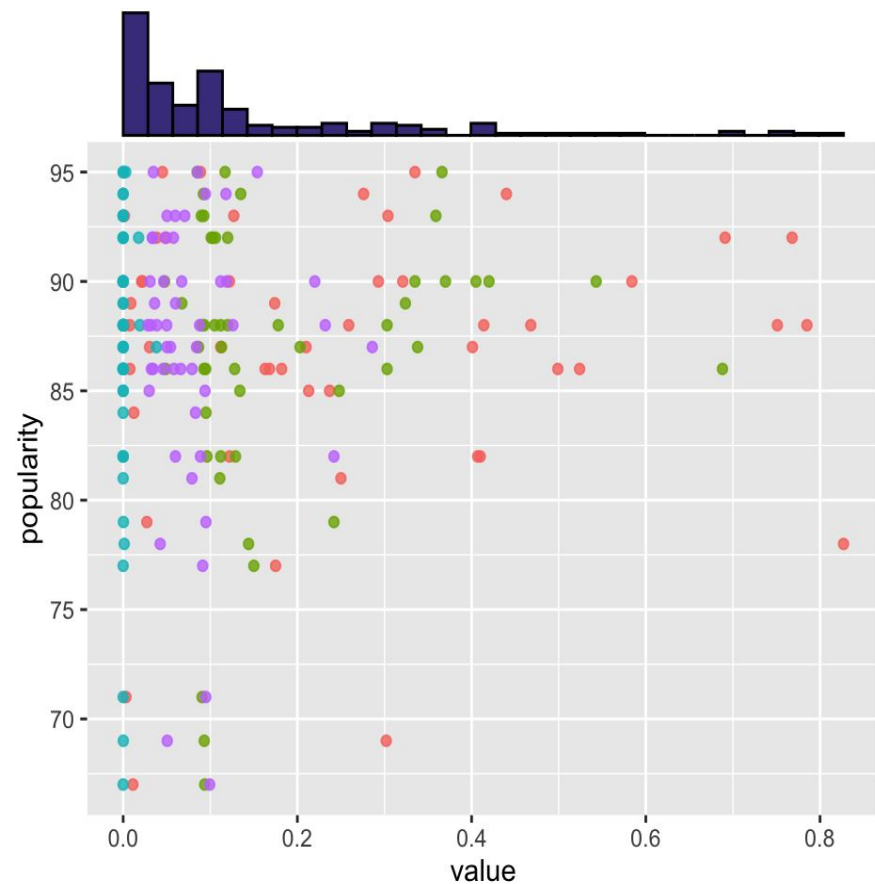
Describes how suitable a track is for dancing based on a combination of musical elements, including tempo, rhythm stability, beat strength, and overall regularity.

Energy

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

Valence

Describing 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).



Acousticness

A confidence measure from 0.0 to 1.0 of whether the track is acoustic. Acoustic songs tend to be lower energy and quieter.

Liveness

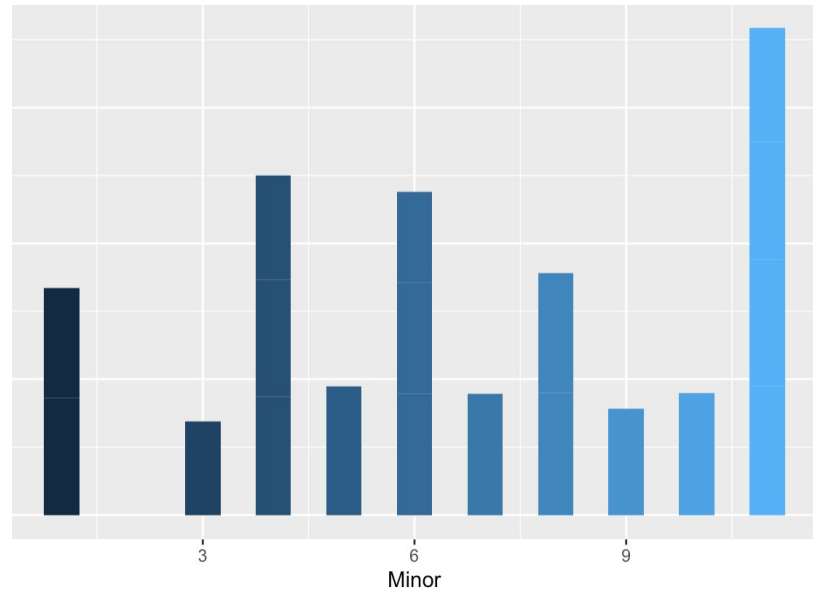
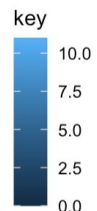
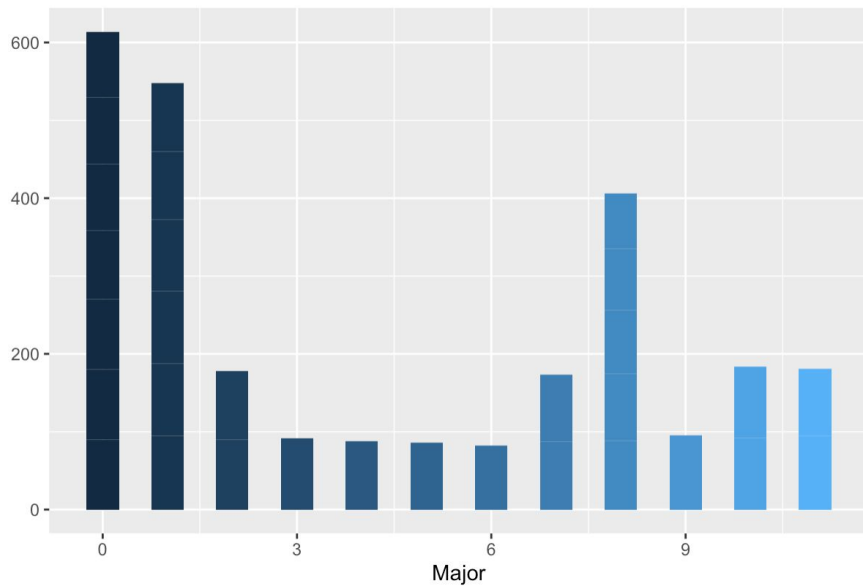
Detects the presence of an audience in the recording. Higher liveness values represent an increased probability that the track was performed live

Instrumentality

Predicts whether a track contains no vocals. The closer the instrumentality value is to 1.0, the greater likelihood the track contains no vocal content.

Speechiness

Detects the presence of spoken words in a track. The more exclusively speech-like the recording, the closer to 1.0 the attribute value.



	Min	Median	Max
Duration	2.213	3.312	4.785
Tempo	72.02	120.52	180.92
Time Signature	3	4	4

Conclusion

- Popular songs do have particular formulas and features.
- The more popular a track is, the more likely it contains vocals
- Controlling duration, tempo, and time signature may boost the song's popularity.

Future Work

- Break down “popularity” into more detailed subsets.
- Find out other possible features which cause the songs to get hit.
- Compared with other streaming music services.