

The Power of Features: How Artists Collaborations Influence Streaming Success



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Introduction and Data

Spotify Streaming Data from Kaggle

Hypothesis: We hypothesize that songs with a higher number of featured artists (higher artist_count) will have higher stream counts than songs with a single artist.

Research question: Are collaborations or features (the number of artists on a track) associated with increased streaming success?

- Monthly release timing
- BPM of song
- Apple Music

The data set we found is from Kaggle and is shows Spotify streaming songs up to the year 2023 with artists, stream count, chart rank, release date, etc

the author of this data set is Nidula Elgiriye withana, who procured this data from multiple sources using Python

In order for our team to make fair comparisons between songs and avoid differences in popularity across years, this analysis focuses only on songs released in 2022

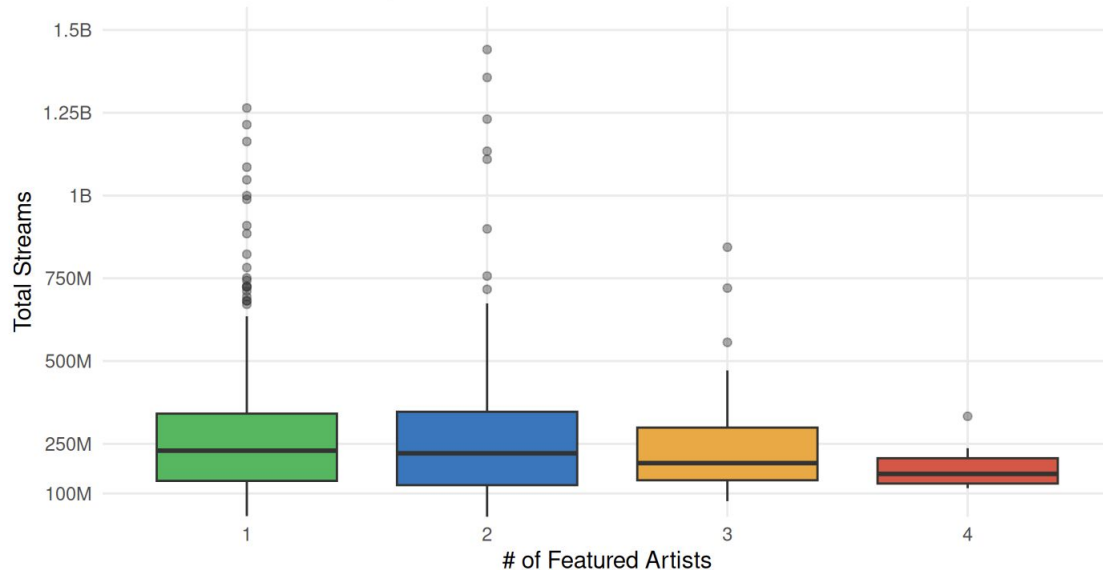
Graph 1

Total Streams of Songs Released in 2022

- Median line between single and duo artist songs appear about a little less than 250M
- Data distribution shrinks as more artist features are added
- Many outliers for 1-2 artist feature songs -> less data for 3+ featured songs

Do Collaborations Drive More Streams?

Distribution of stream counts by the # of featured artists, songs released in 2022

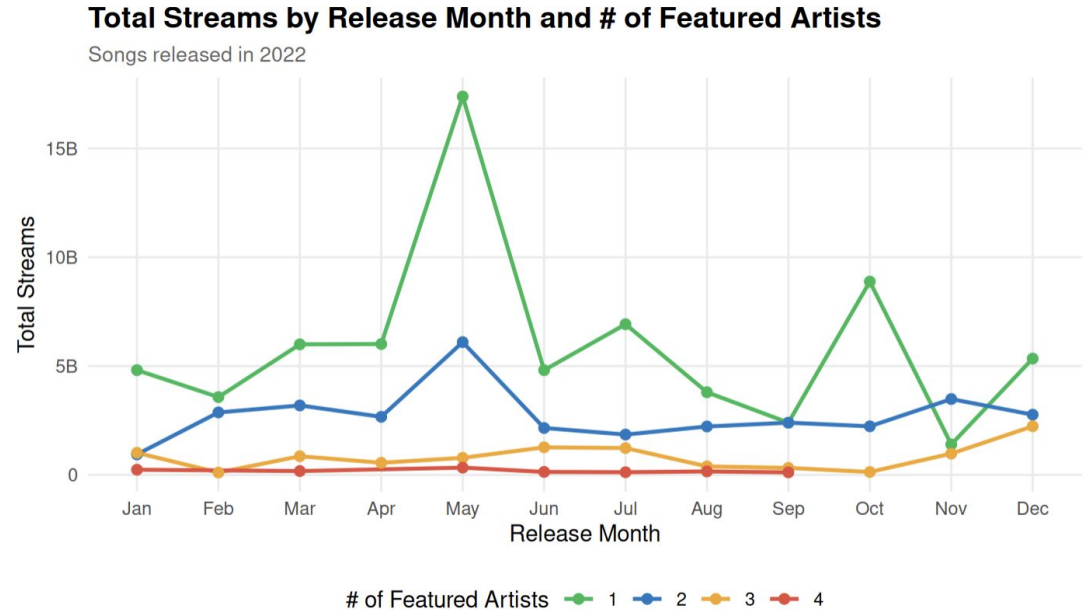


Source: Kaggle – Spotify Top Streaming Songs (ElgiriyeWithana)

Graph 2

Release Month of Songs in 2022

- Releasing a song in May has the highest total streams for single-artist songs in 2022
- Single-artist songs generally has the most streams
- Four-artist songs never reach over 5B streams for a given release month, but there is also less data for four-artist songs



Source: Kaggle – Spotify Top Streaming Songs (Elgiryewithana)

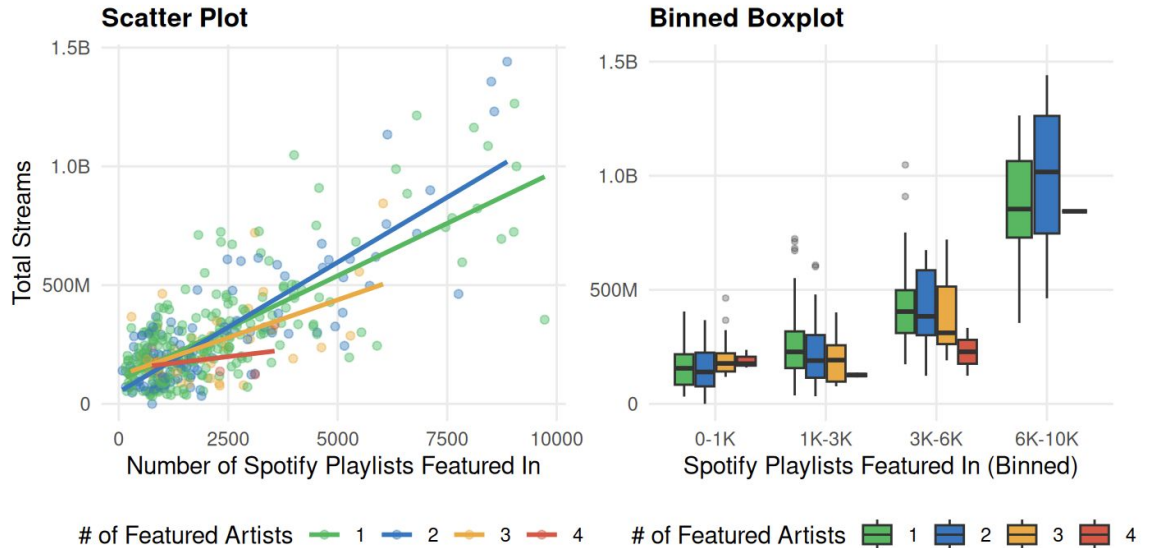
Graph 3

Spotify Playlist Features

- Clear positive relationship between playlist features and stream counts
 - Duo tracks gain streams at a faster rate, contrasting first box plot where solo and duo tracks were similar
- Playlist count doesn't fully explain streaming
- Gap widens between artist features as playlist features increases
- High playlist penetration rare for songs with more collaborators
 - Likely contributes to low streaming
- Spotify playlist placement stronger secondary predictor
 - Duo tracks benefit disproportionately

Spotify Playlist Features vs. Streaming Success by # of Featured Artists

Songs released in 2022 featured in fewer than 10,000 Spotify playlists



Source: Kaggle – Spotify Top Streaming Songs (Elgiriwithana)

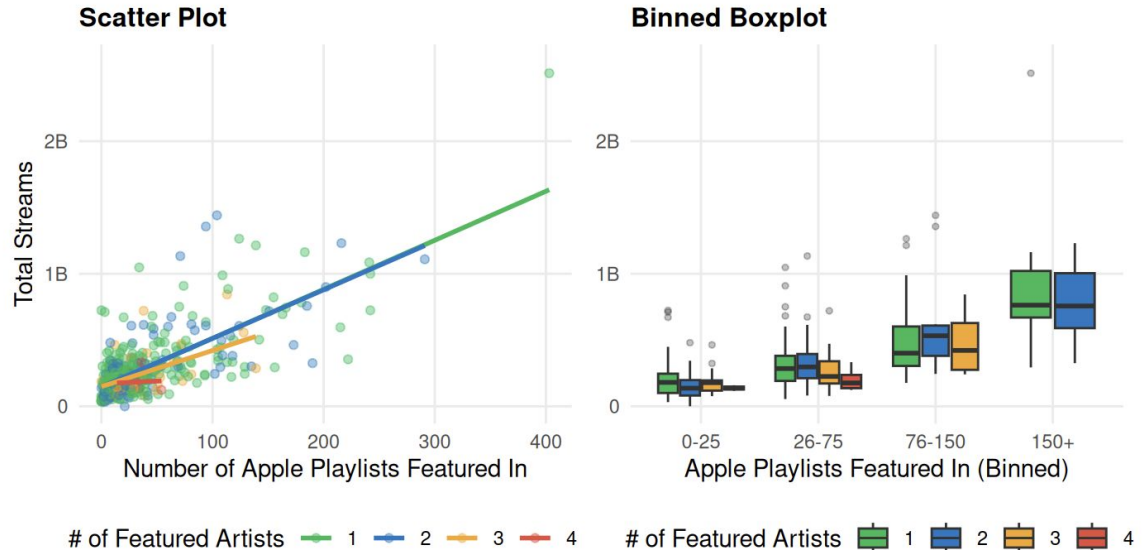
Graph 4

Apple Playlist Features

- Positive trend with solo and duo tracks having steepest slopes
 - 3- and 4-artist tracks: smaller slopes and narrower x-axis range
- Solo and duo tracks pull ahead with generally rising medians and widening IQRs
- Songs added to Apple playlists are positively associated with streaming success
 - Strongest for 1- and 2-artist tracks

Apple Playlist Features vs. Streaming Success by # of Featured Artists

Songs released in 2022



Source: Kaggle – Spotify Top Streaming Songs (ElgiriyeWithana)

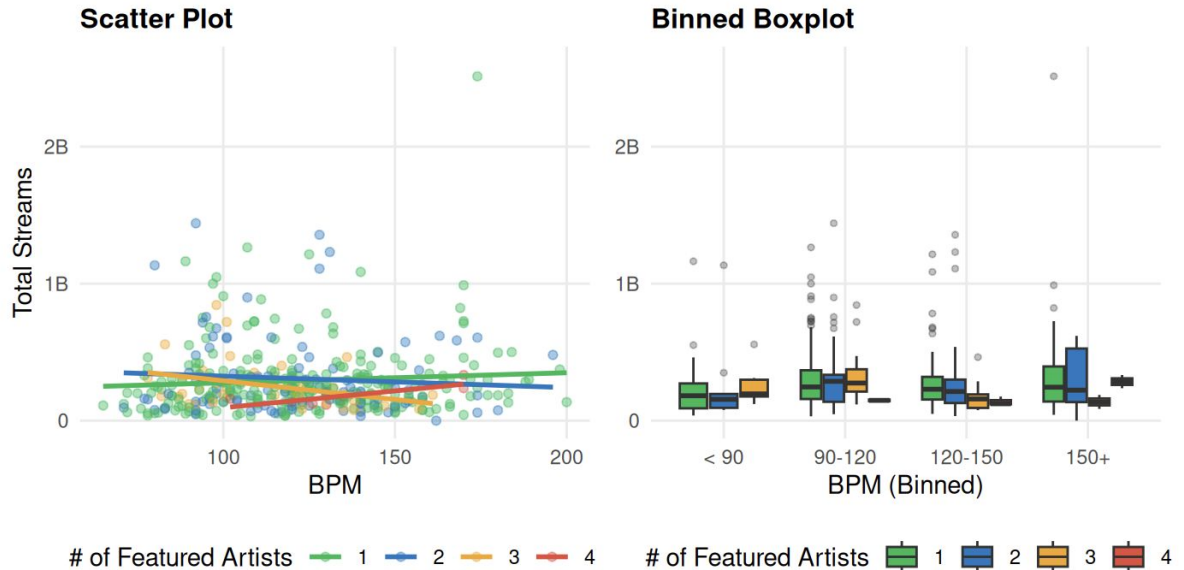
Graph 5

BPM and Total Streams

- 10 most popular songs are displayed for each group
- Among the top 10 solo tracks, higher BPM is moderately associated with more streams
- No meaningful relationship between BPM and streaming success for 2 and 3-artist tracks.
- Data doesn't support a consistent relationship between BPM and streaming success.

BPM vs. Streaming Success by # of Featured Artists

Songs released in 2022



Discussion

- Overall, we can't make an absolute claim that the number of feature artists causes more streams of a song
 - Only observed the year 2022 and not a period of time
 - There is significantly less data for songs with 3+ artist features in the data set
- The median stream count across artist groups were relatively similar, hovering between 200-250 Million
- Future research and data should include more variables like: genre, artist popularity, social media trends, marketing exposure, etc

Ideas for the future:

- Examine whether specific genres benefit more from collaborations than others
- Comparing the popularity of artists prior to collaborating on a song
- Research how viral platforms influence streaming success compared to traditional playlist exposure