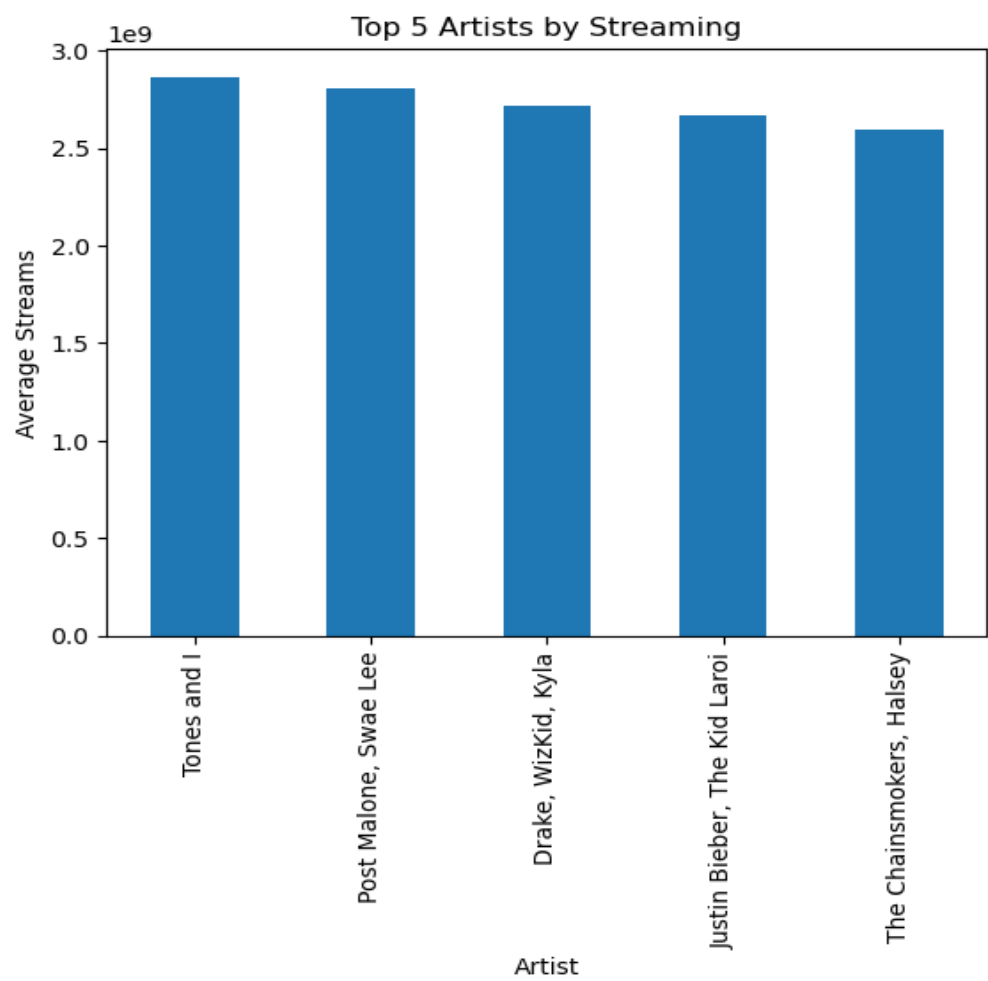
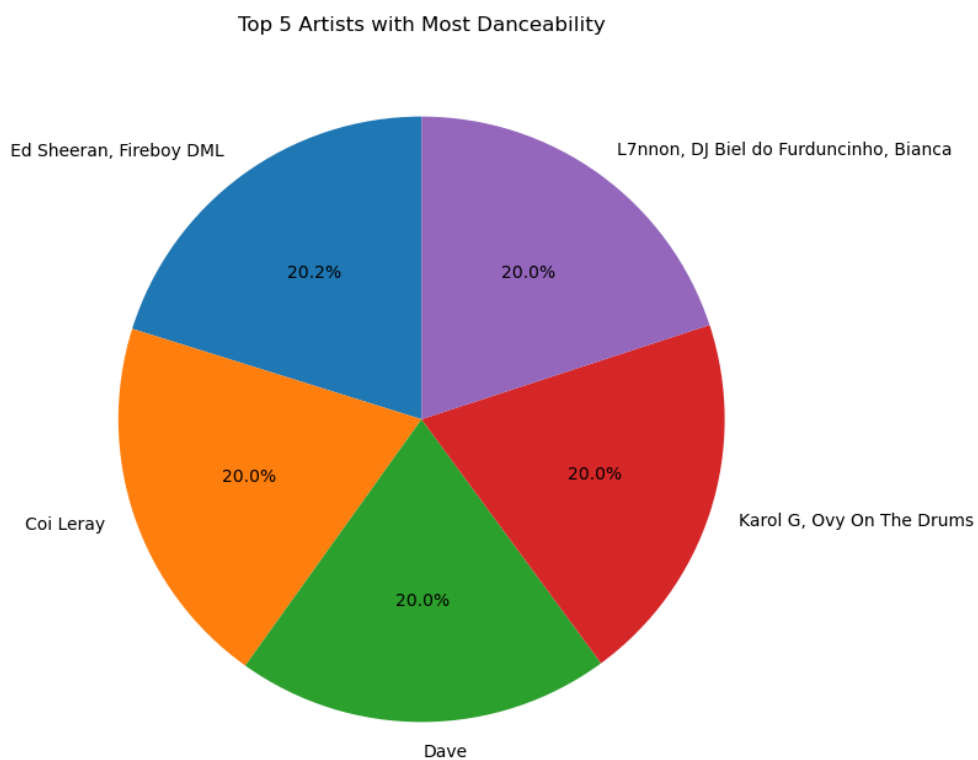
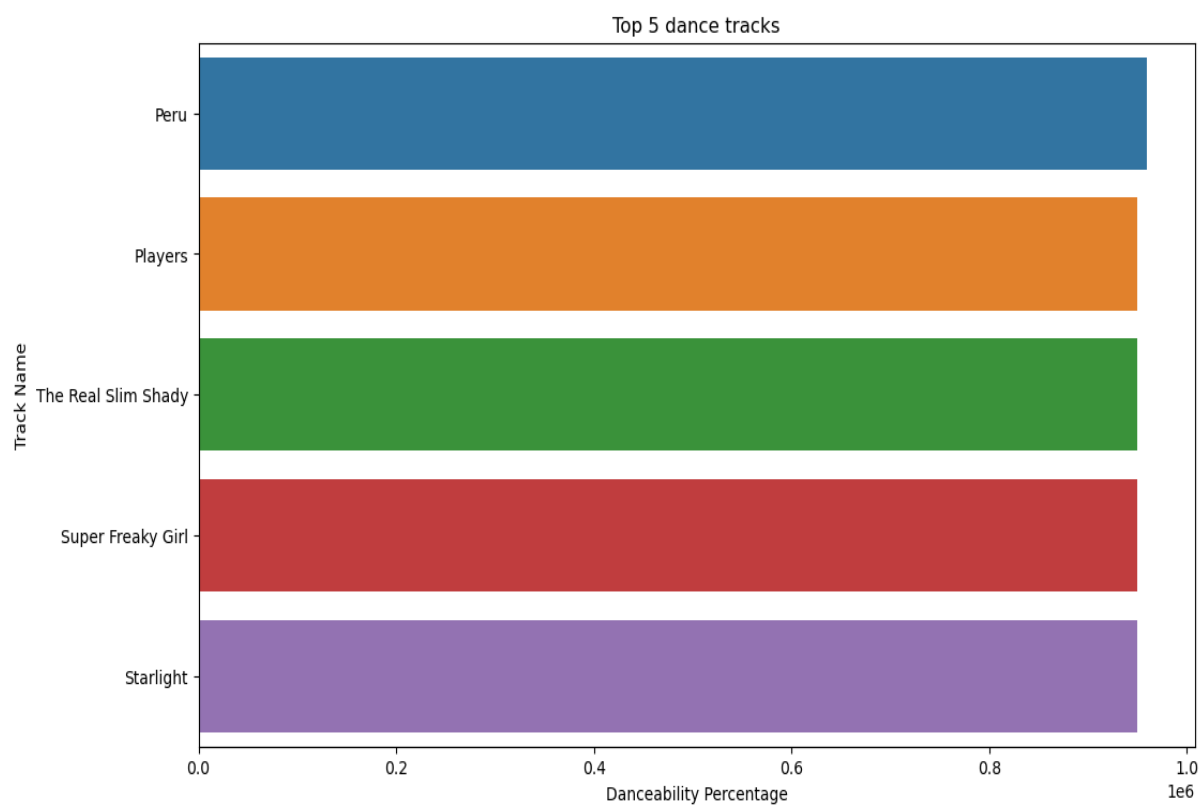


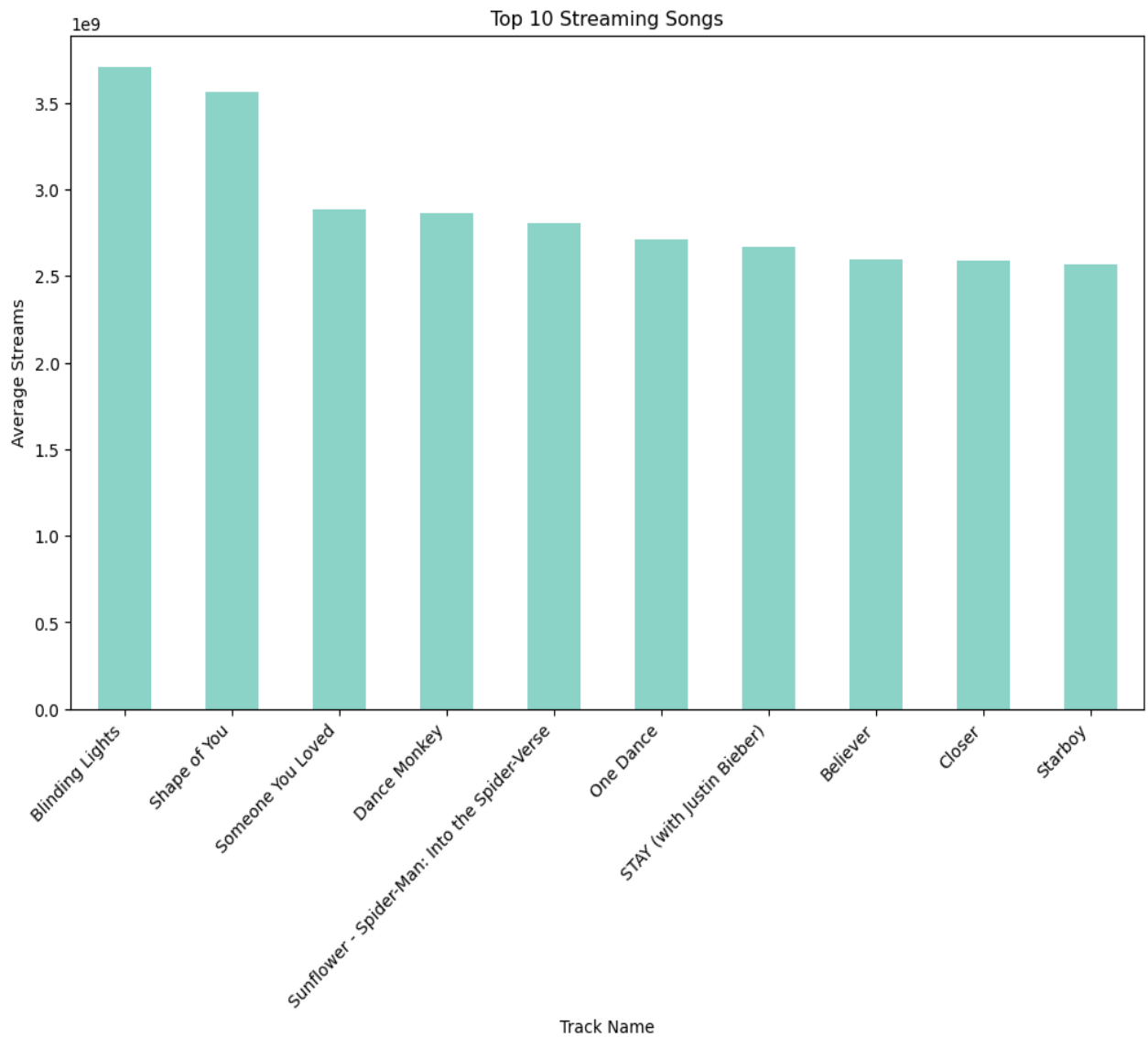
# SPOTIFY 2023 SONG ANALYSIS



## Most streamed song

Blinding Lights(track name) by The Weekend(artist).



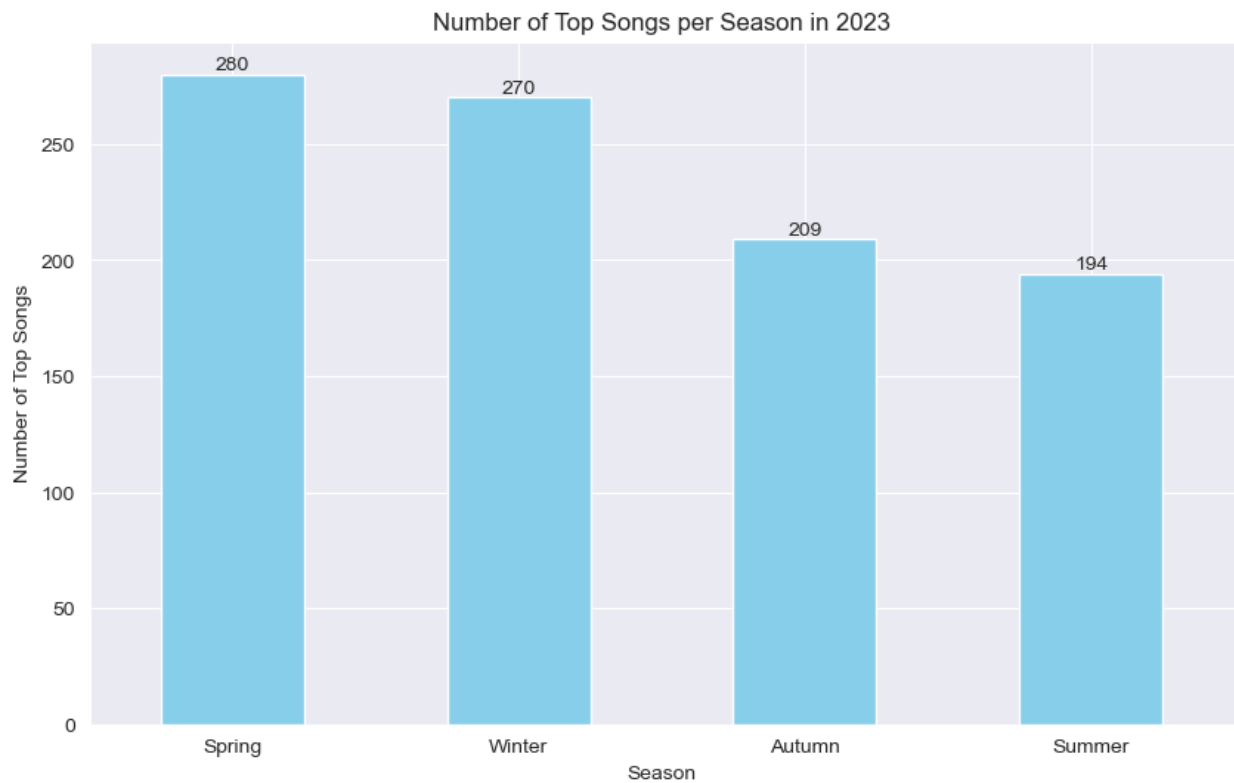


## Correlation Heatmap of Song Characteristics



It shows that **valence** is highly co-related with **danceability** and **energy**.

## Seasonal Hits:



So, in spring people used to listen song more than any season.

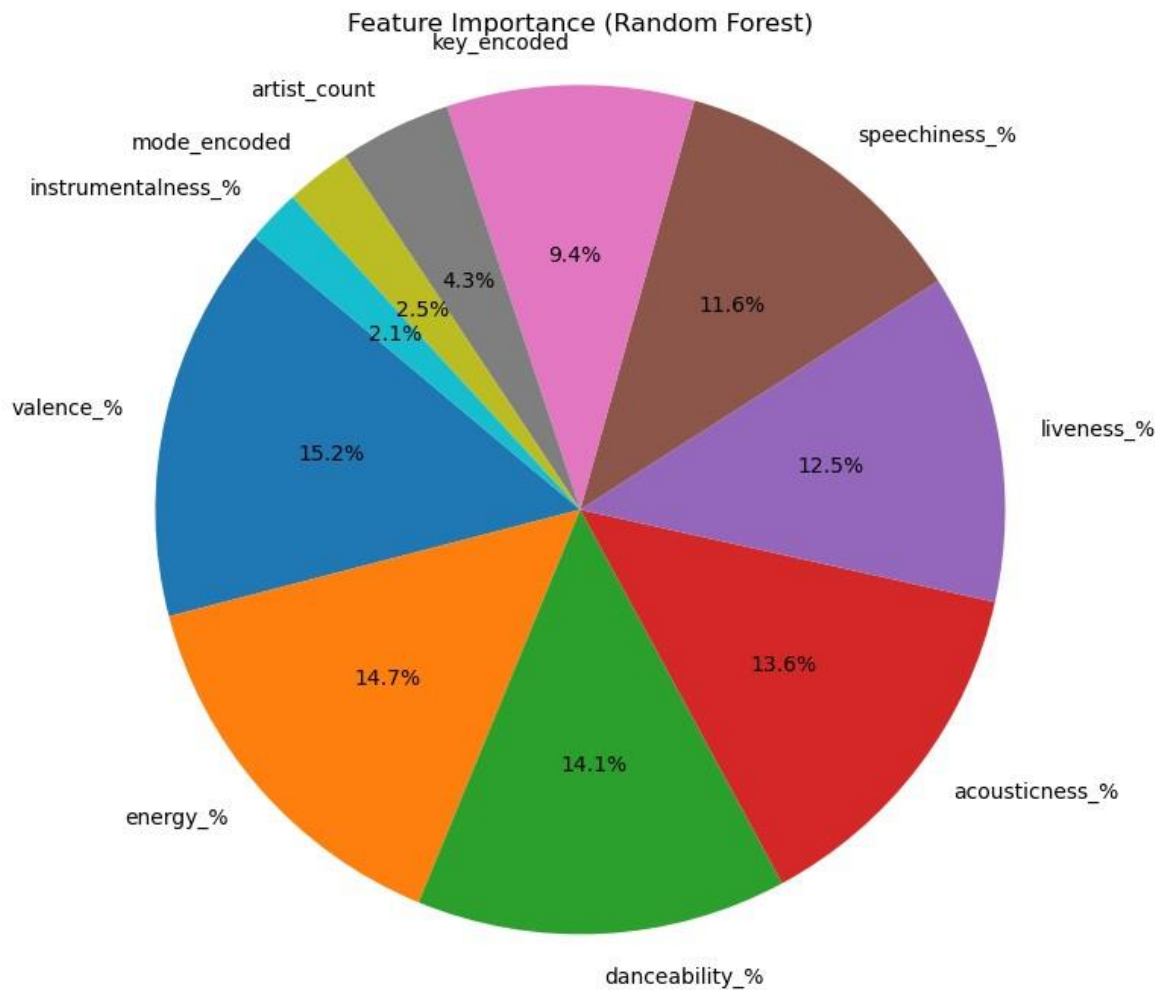
Then different classification model is applied to know which feature of the song play a big role on the number of the streaming of a song.

| Classification Model | Accuracy |
|----------------------|----------|
|----------------------|----------|

|                        |        |
|------------------------|--------|
| Decision Tree          | 0.5654 |
| Cross Validation       | 0.51   |
| Random Forest          | 0.5812 |
| SVM                    | 0.5445 |
| Naive Bayes (Gaussian) | 0.5384 |
| Logistic Regression    | 0.5692 |

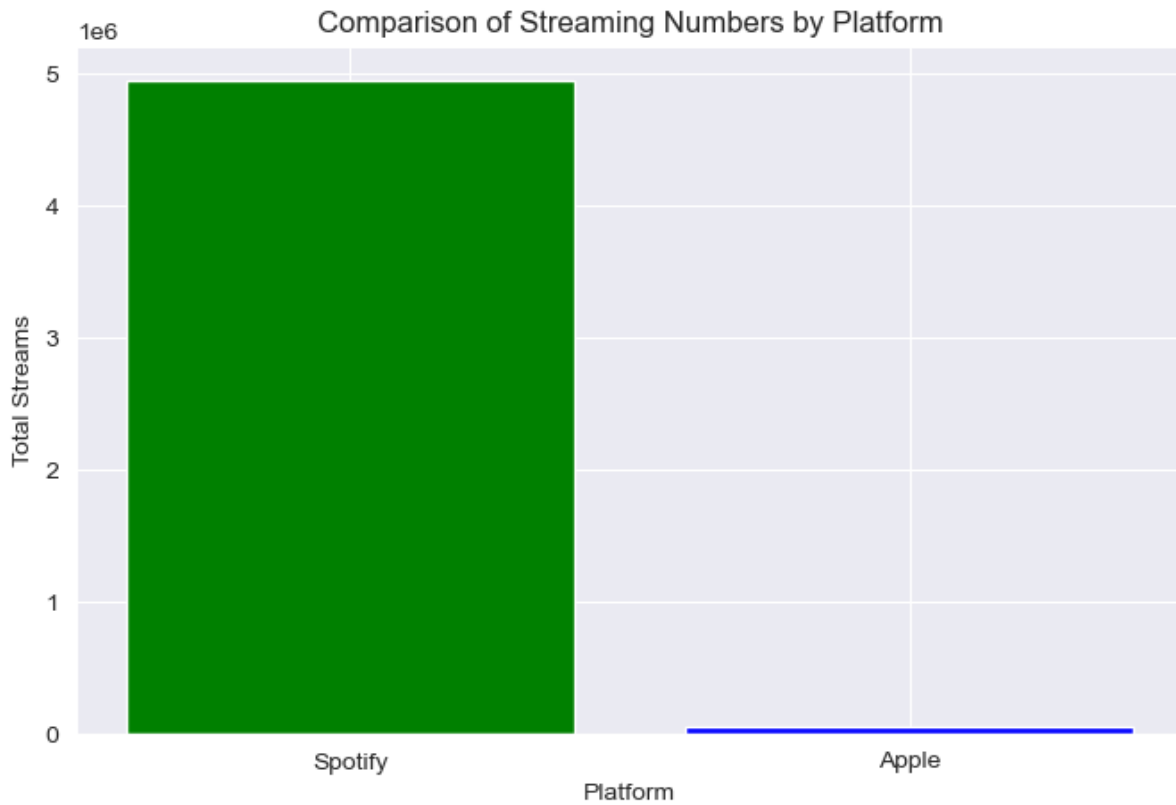
Though the accuracy scores are fluctuated within the different parameters, **Logistic Regression** and **Random Forest** are usually giving highest accuracy among them (almost 0.6).

So, we take the random forest classification model as best model.



So, we see **valence** and **energy** are the most crucial features for a song in terms of number of streaming of song.

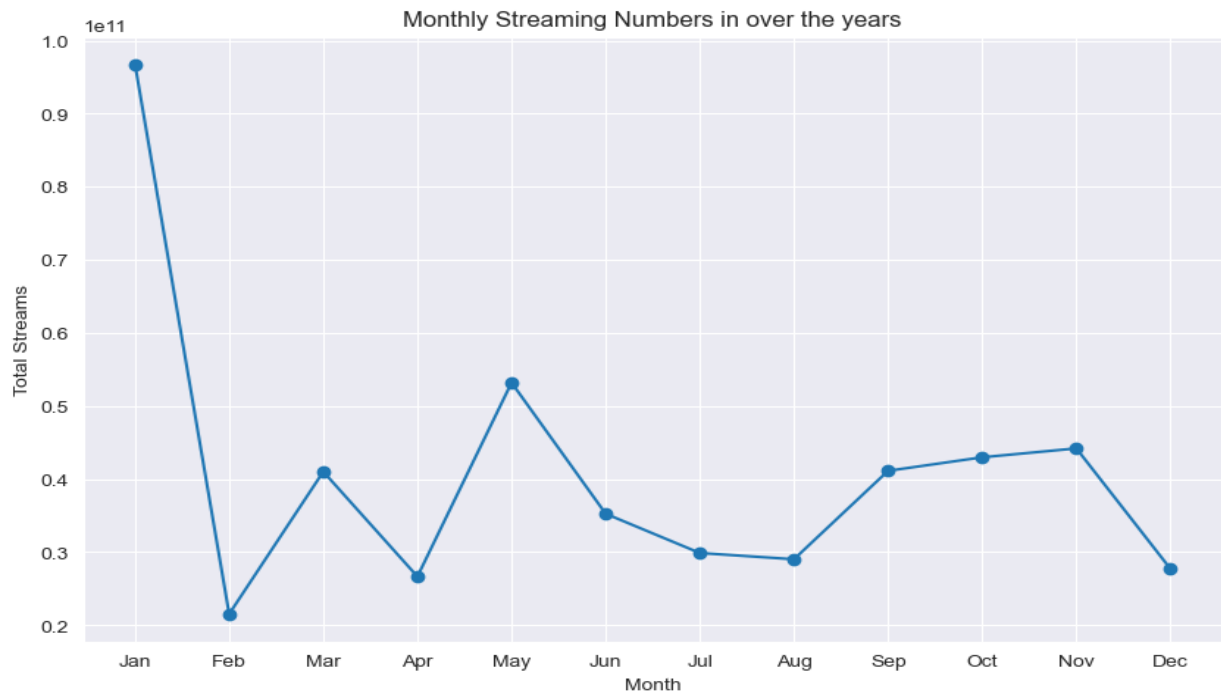
### Platform comparison between spotify and apple



Here we see that most people use spotify as their song app.

**Monthly streaming numbers over the years(Mostly 2023)**





## Sentiment Analysis

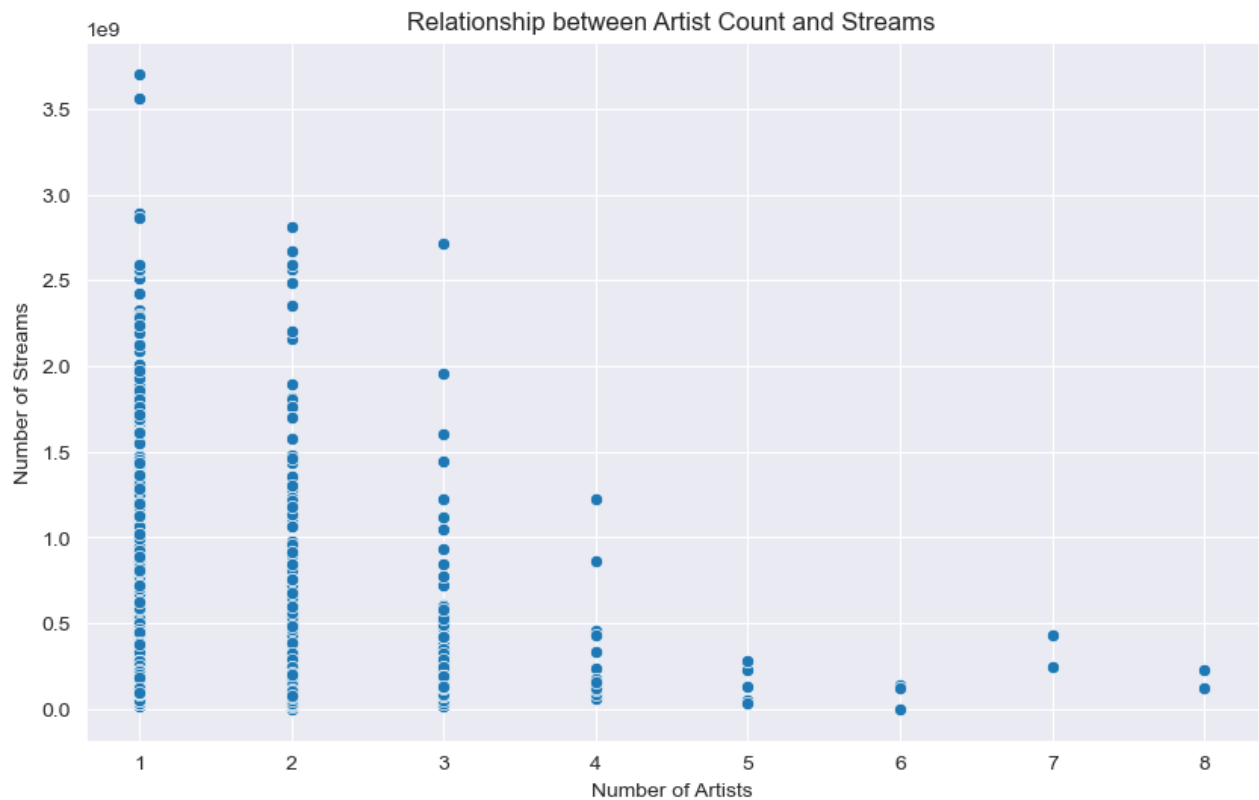
We use **textblob** to analyse the sentiment .

|   | track_name                          | track_name_sentiment |
|---|-------------------------------------|----------------------|
| 0 | Seven (feat. Latto) (Explicit Ver.) | 0.0                  |
| 1 | LALA                                | 0.0                  |
| 2 | vampire                             | 0.0                  |
| 3 | Cruel Summer                        | -1.0                 |
| 4 | WHERE SHE GOES                      | 0.0                  |

|   | artist(s)_name   | artist_name_sentiment |
|---|------------------|-----------------------|
| 0 | Latto, Jung Kook | 0.0                   |
| 1 | Myke Towers      | 0.0                   |
| 2 | Olivia Rodrigo   | 0.0                   |
| 3 | Taylor Swift     | 0.0                   |
| 4 | Bad Bunny        | -0.7                  |

## Artist Influence on streaming number



## Artist name and aggregating the streaming numbers

```
In [35]: # Grouping the data by artist name and aggregating the streaming numbers
artist_streams = df_tracks.groupby('artist(s)_name')['streams'].sum().sort_values(ascending=False)

# Displaying the top 10 artists by total streaming numbers
for artist, streams in artist_streams.head(10).items():
    print(f"{artist}: {streams}")
```

```
The Weeknd: 14185552870.0
Taylor Swift: 14053658300.0
Ed Sheeran: 13908947204.0
Harry Styles: 11608645649.0
Bad Bunny: 9997799607.0
Olivia Rodrigo: 7442148916.0
Eminem: 6183805596.0
Bruno Mars: 5846920599.0
Arctic Monkeys: 5569806731.0
Imagine Dragons: 5272484650.0
```