



Spotify Exploratory Data Analysis

By Favour Ubadike



Welcome



About the Data



My Objectives



The Top 10



Contributing Factors



Days



Duration



Danceability



Energy



Other



Recommendations



Contact Me



Introduction

Welcome

- Interests: Cosmetics, Beauty, Gaming, Music and Healthcare
- Diploma in Pharmaceutical Science
- PL 300 Power BI Associate
- Naturally inquisitive

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Background

About The Data

+8 ...

- Data is from 2 Datasets ' Spotify top chart songs 2022' and 'Spotify Top 10000 Streamed Songs'
- The dataset ranks song names by Total streams, including energy or loudness
- SQL, Excel, Python, PowerBI used to clean, visualise, and gain insight
- A scenario is created to answer a business questions



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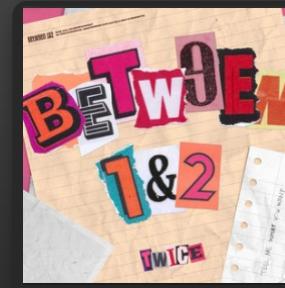
Other



Recommendations



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TWICE

About The Data

+8 ...

TWICE (A Korean girl group) have released a new Album 'Between 1&2', however none of the songs have made it into the top 10. Their artists are planning to release a single and want to know what they can do to make sure that the song hits top 10.

Their Request

They request to understand the current top 10 ranking and how they can improve their global streaming number

--Data set is going to be a recommendation for TWICE
-- so need to see their position and peak rank
`SELECT * FROM `niyo-sql-project.Spotify.Analysis`
WHERE Artist_Name = 'TWICE '
LIMIT 100;`



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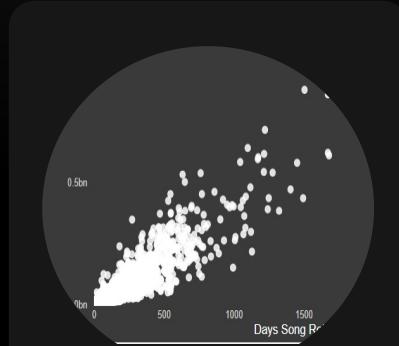


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My Objectives



What are the top 10 songs?



What Factors Contribute to streaming numbers?



How can TWICE reach top 10?



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= XLOOKUP(N4,Spotify_final_dataset[Top 10 (xTimes)],Spotify_final_dataset[Song Name])			
J	K	L	M
Total of all streams	Percentage of Total		N
2.02936E+11	0.435294815		
2.02936E+11	0.426160239	SUM	2.02936E+11
2.02936E+11	0.384925866	MAX	302
2.02936E+11	0.362112986	XLOOKUP	Sunflower SpiderMan: Into the SpiderVerse
2.02936E+11	0.354232902		

Objective 1

The Top 10



#

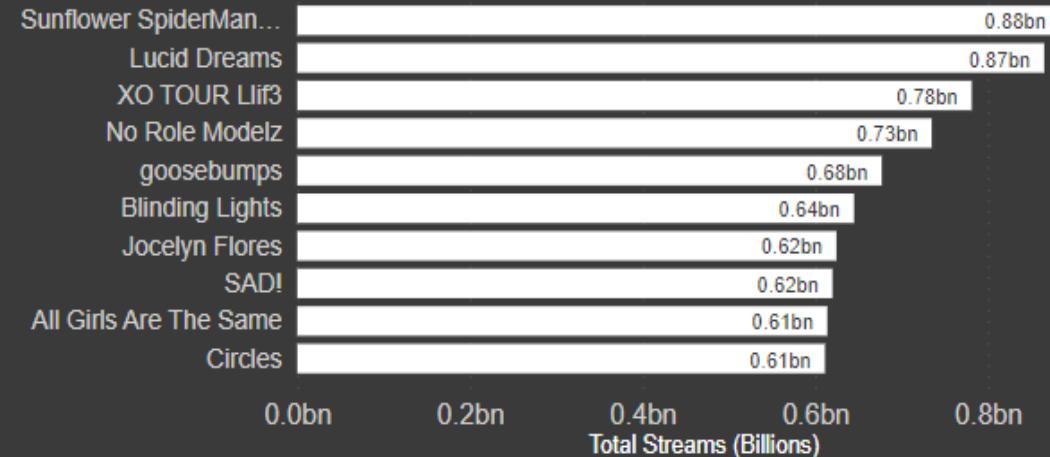
Title

1 Ranking Based on Number of Streams

2 Power BI graph to right lists top 10 songs

3 Most streamed song - Sunflower SpiderMan: Into the SpiderVerse

Top 10 Songs by Streaming Number



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Contributing Factors

These are factors that have been found to Affect Streaming Numbers

01

Number of Days Song released

04

Acousticness and Speechiness

02

Duration of the song

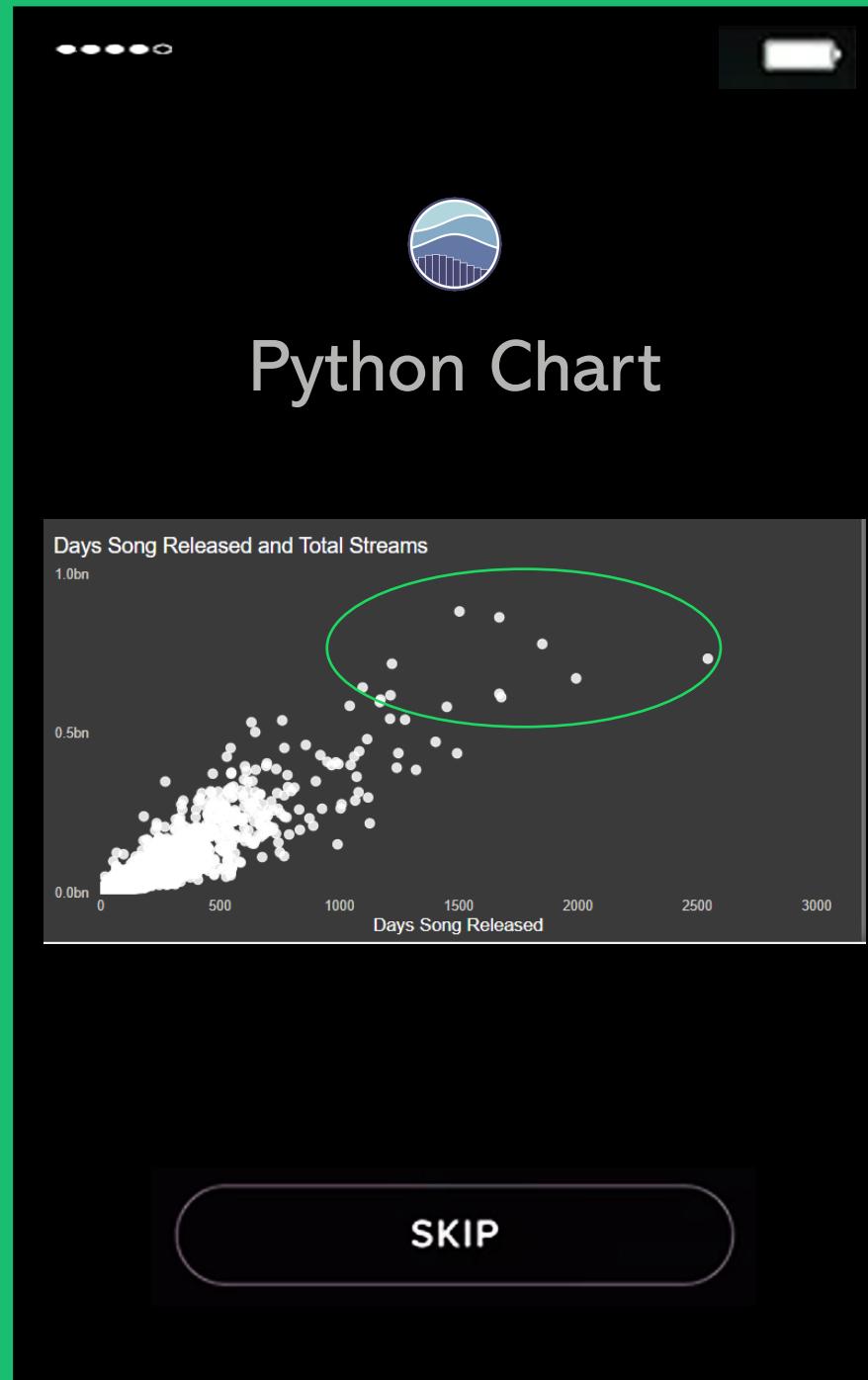
05

Energy

03

Danceability

- Positive correlation between Number of days and Total streams
- Songs in the top 10 have been released for more than 1000 days
- SQL, compared 2 songs. Song with 20 times higher streams, had been released for 60 times more days
- Expected as more people (who may not be fans) have time to discover the songs



```

65 -- Does the number of days the song has been released have any
66 impact on number of streams
67 SELECT Position, Artist_Name, Total_Streams, Days
68 FROM `niyo-sql-project.Spotify_Analysis`
69 WHERE Position = 1 OR Position = 1029
70 ORDER BY Position ASC;
    
```

Position	Artist_Name	Total_Streams	Days
1	Post Malone	883369738	1506
1029	SZA	49884805	20

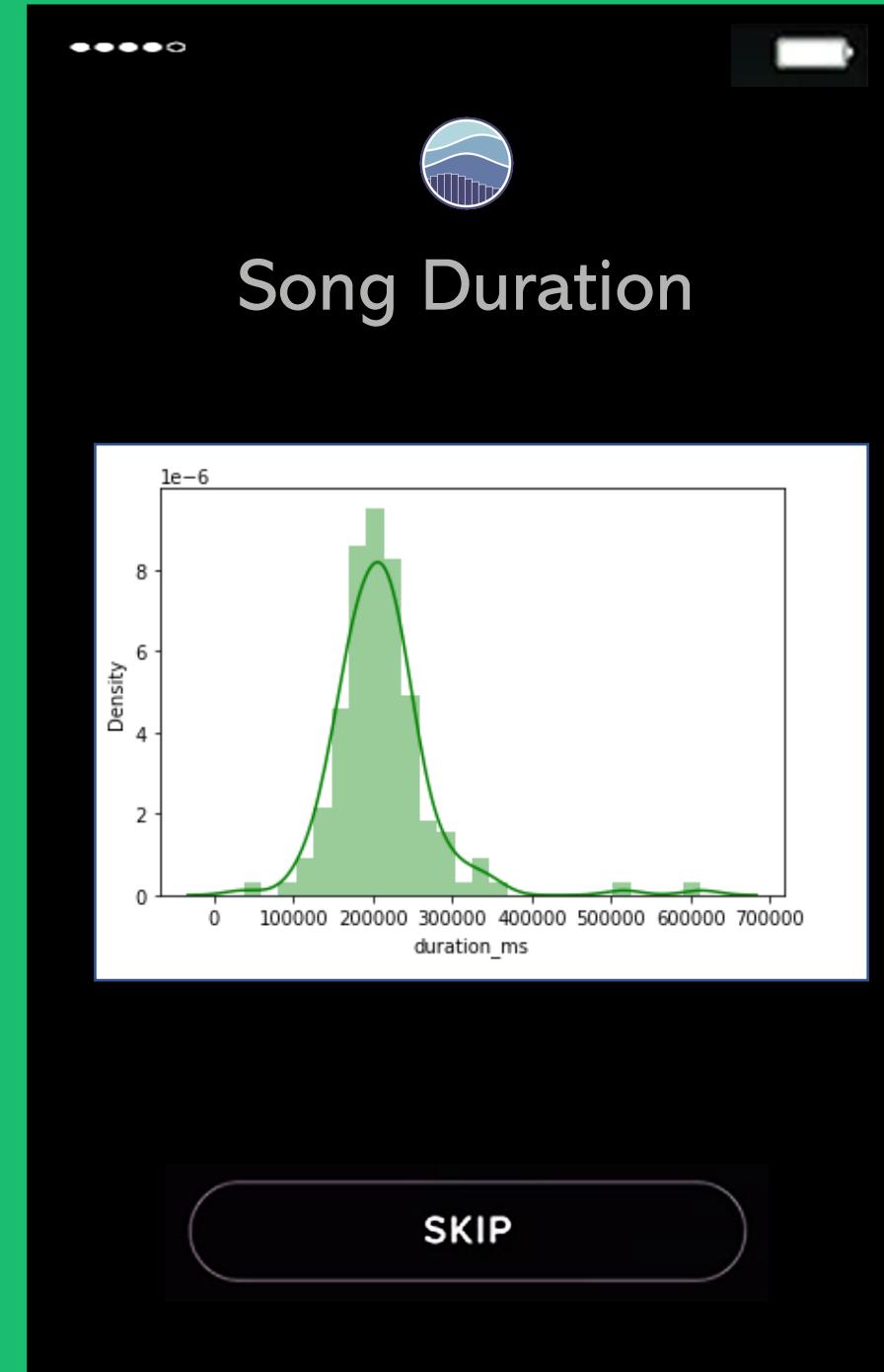
SKIP

- Graphs were found by looking only at songs that have peaked within the top 10
- Most songs in the data have a duration between 2 and 4 minutes
- Expected due to attention span and being radio-friendly

Python code:

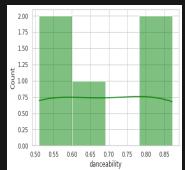
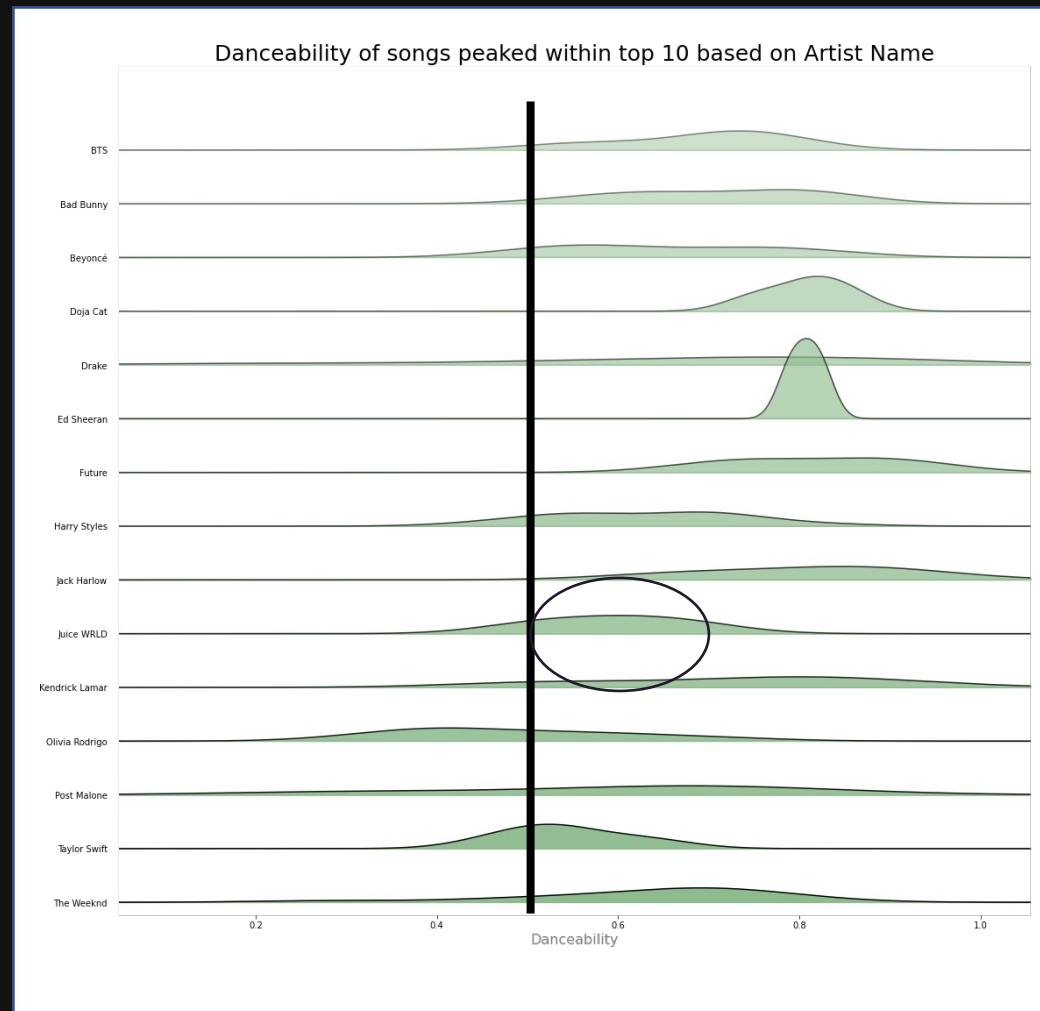
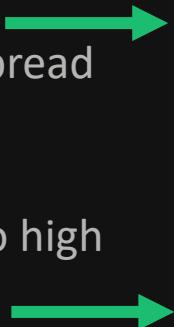
```
# Only looking at songs within top 10
resultdf.drop(resultdf.loc[resultdf['Peak Position'] > 10].index, inplace = True)
resultdf

#Song duration Distribution for songs that have peaked within top 10
sns.distplot(resultdf["duration_ms"], color = 'green')
```



Danceability

- Ridgeline plot shows Songs that have ranked within top 10, categorized by the Artist name
- Post Malone has a largely spread out danceability of songs
- Majority of have a middle to high Danceability (above 0.5)
- Rise of apps such as TikTok makes danceable songs more popular



Danceability Distribution
Box Plot



0:23



-3:25

- Radar chart showing 3 songs found in top 10
- Danceability is higher than the other features
- Acousticness and Speechiness kept below 0.5
 - Acousticness: how likely the song is to be acoustic
 - Speechiness: detects presence of spoken words in a song



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Recommendations

TWICE should make sure that:

2 - 4

Their new song
should be between
2 and 4 minutes

1000+

They should aim
for top 10 after
1000 days of their
song release

High

The Song has high
danceability

Low

The song has low
acousticness and
speechiness

Thank You

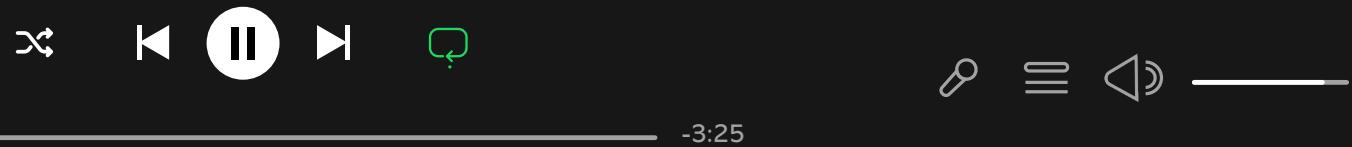


Very much

For listening to my presentation



0:23





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Email:

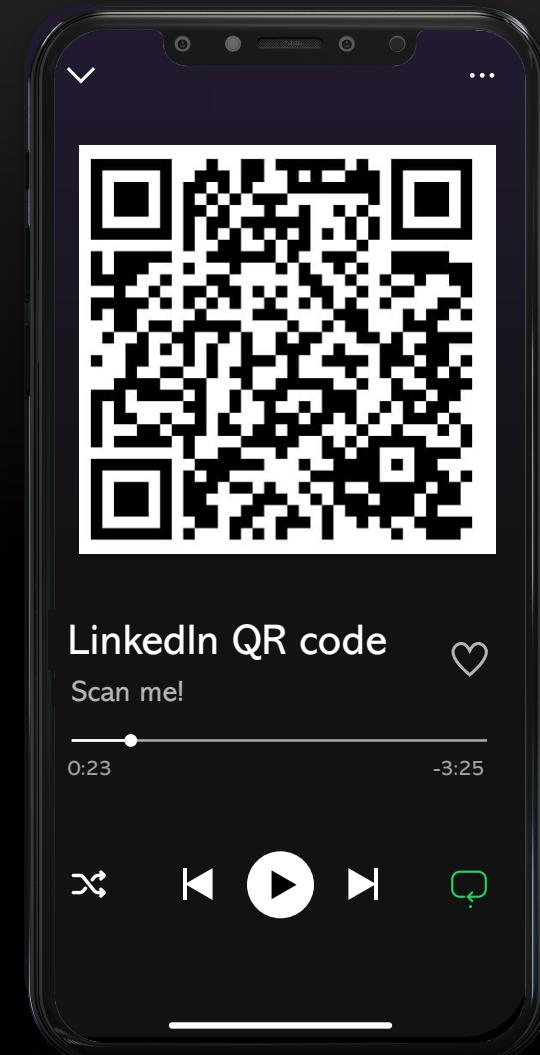
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<https://github.com/FavourU>

LinkedIn:

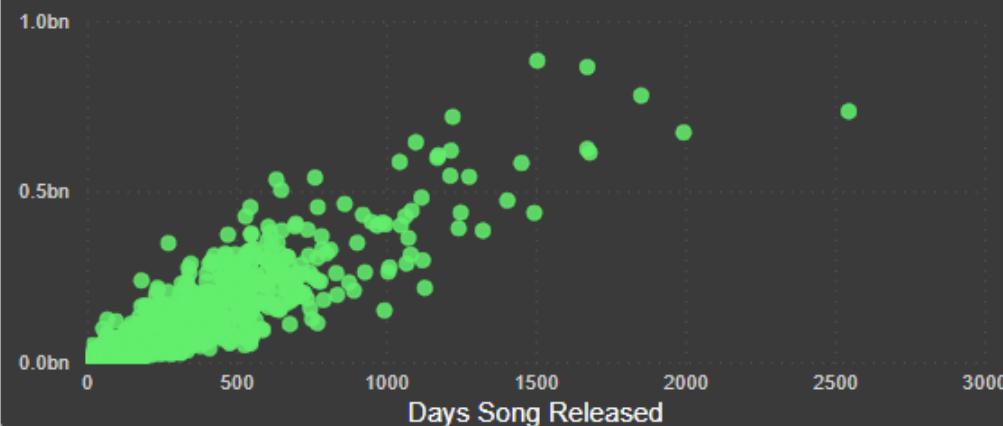
<https://www.linkedin.com/in/favourubadike/>



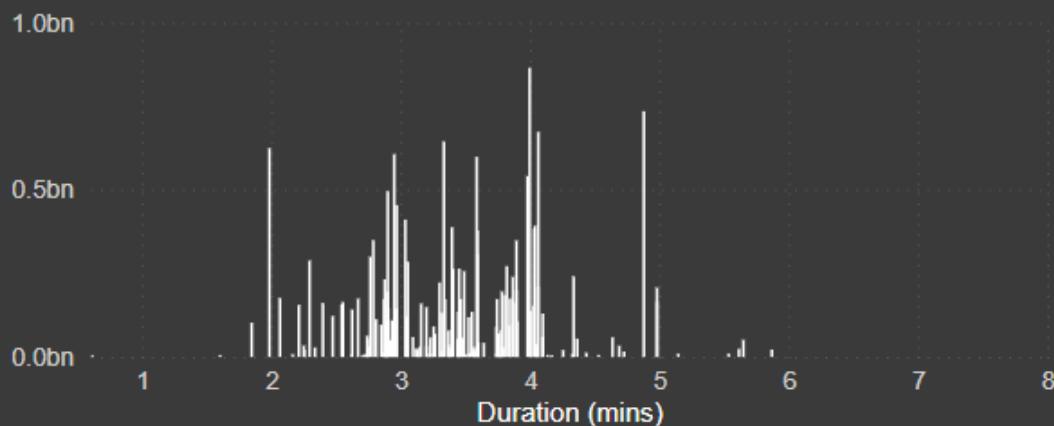


Spotify EDA Dashboard: Ranking within the Top 10

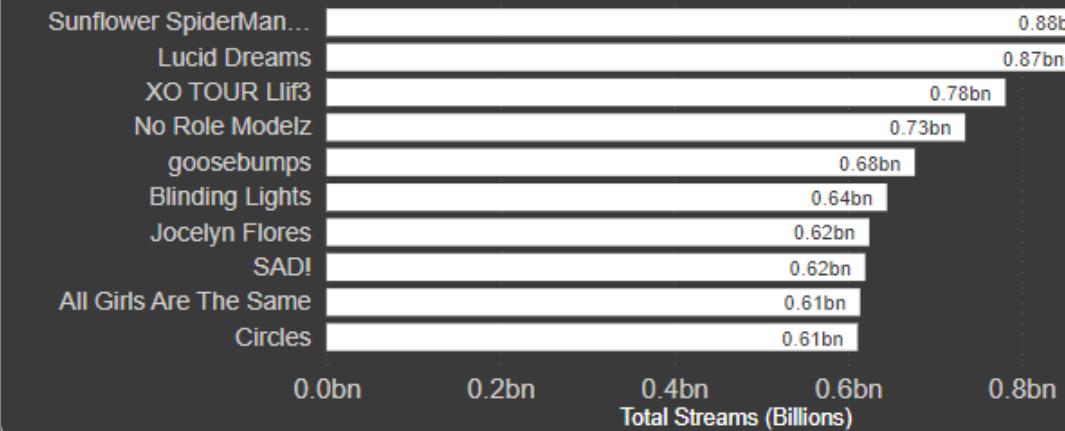
Days Song Released by Total Streams



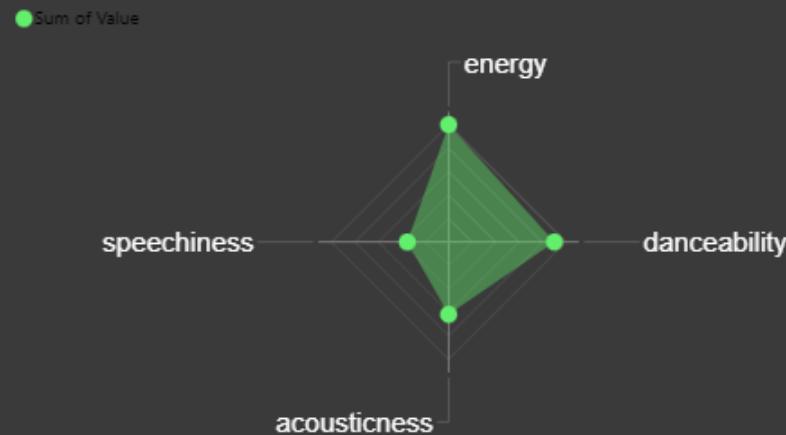
Duration Density



Top 10 Songs by Streaming Number



Properties of song: Lucid Dreams



Slides have been created using:



Slide Chef