Power BI Dashboard Documentation:

Overview

This Power BI dashboard is designed to provide an interactive overview of Spotify's most streamed songs. It allows users to analyze data by artist, date, and other song-specific attributes, with various visuals summarizing key performance metrics.

Purpose

The purpose of this dashboard is to enable users to:

- Explore and filter the most streamed songs by artist name and date.

- Gain insights into total streams, tracks, and average streams across different periods.

- Compare individual song performance metrics, such as total streams and various musical attributes.

Dashboard Visuals

1. Slicer: Artist Name

- **Description**: This slicer allows users to filter the dataset by the artist's name.

- **Functionality**: By typing the name of an artist, the entire dashboard updates to reflect only the data related to the selected artist.

2. Slicer: Date Range

- **Description**: This slicer allows users to filter the data based on a specified date range.

- **Functionality**: Users can select a start and end date, updating all the visuals to display information only within the chosen period.

3. Cards: Total Streams, Total Tracks, and Average Streams per Year

- **Total Streams**: Displays the total number of streams for the filtered dataset.

- **Total Tracks**: Shows the total number of tracks within the filtered dataset.

- **Average Streams per Year**: Calculates and displays the average number of streams per year for the filtered dataset.

4. Column Chart: Streams Across Years

- **Description**: This visual shows the distribution of total streams over the years.

- **X-Axis**: Years.

- **Y-Axis**: Total number of streams.

- **Functionality**: Provides a clear view of trends in streaming activity across different years.

5. Table: Tracks per Month and Average Streams per Month

- **Month**: The month of the year.
- **Tracks per Month**: Number of tracks released or streamed each month.
- **Average Streams per Month**: The average number of streams per track in each month.
- **Description**: The table visualizes monthly trends in tracks and streaming activity, helping users to identify seasonal patterns.

6. Song Information:

- **Cover Photo**: The album or song cover image.
- **Name**: The title of the song.
- **Total Streams**: The total number of streams the song has accumulated.
- **Comparison with Average Streams**: Indicates whether the song's performance is above or below the average.
- **Release Date**: The date the song was released.
- **Energy %**: A measure of the song's intensity and activity.
- **Danceability %**: Indicates how suitable the track is for dancing.
- **Valence %**: Measures the musical positiveness conveyed by the song.
- **Liveness %**: Indicates the presence of a live audience in the recording.

7. Slicer: Song Cover Images

- **Description**: This slicer allows users to search and filter the dataset by song, using cover images for easy identification.

- **Functionality**: Selecting a song cover filters the entire dashboard to show information related only to the chosen song.

MEASURES ADDED TO THE DATASET USING DAX (Data Analysis Expressions)

```
= Table.AddColumn(#"Added Custom", "Date", each Date.FromText(Text.From([released_year]) & "-" &
    Text.From([released_month]) & "-" & Text.From([released_day])))
```

To Calculate Average streams per year

```
1 Average_Streams_per_year = CALCULATE(AVERAGE('Spotify Dataset'[streams]),ALLEXCEPT('Spotify Dataset','Spotify Dataset'
  [released_year]))
```

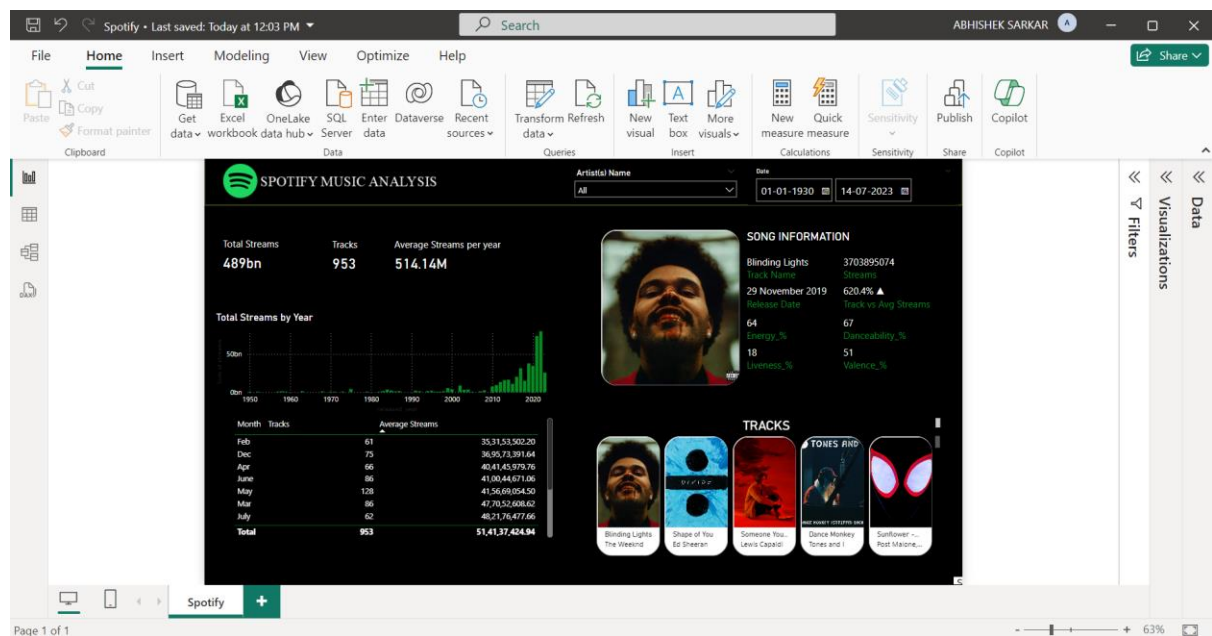## To Calculate Average streams per month

```
1 Average_Streams_per_month = CALCULATE(AVERAGE('Spotify Dataset'[streams]),ALLEXCEPT('Spotify Dataset','Spotify Dataset'
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```
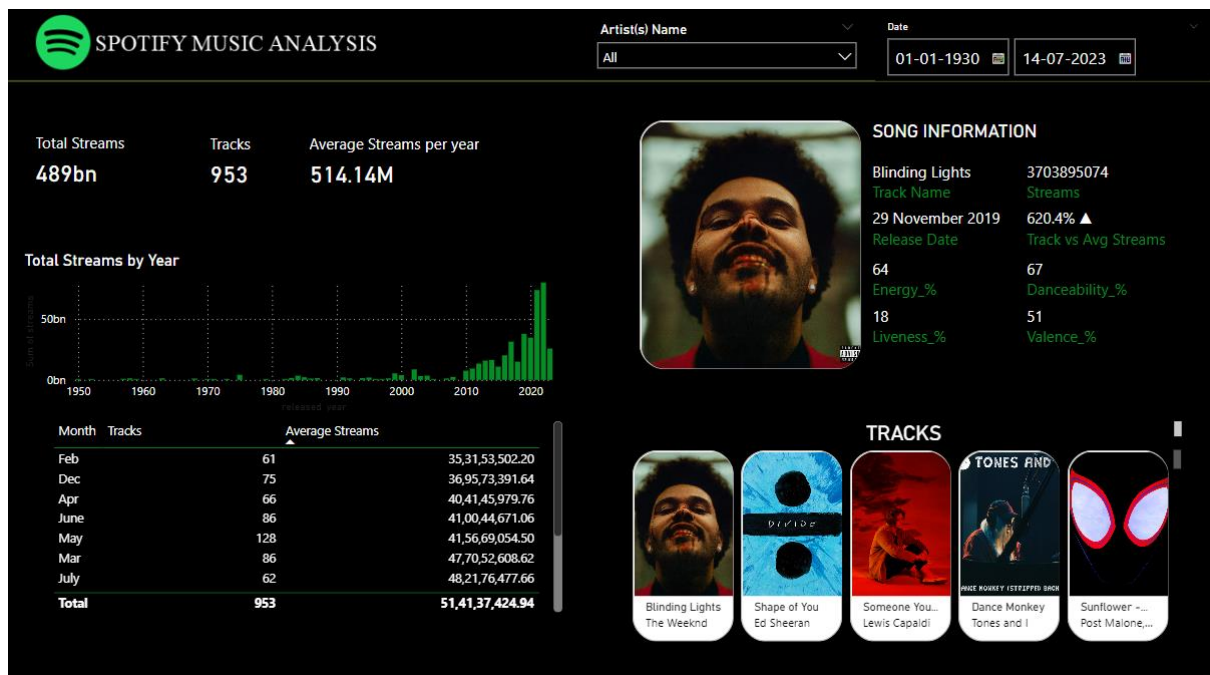
Song vs Avg Streams

```
1 Top_Stream_Songs = CALCULATE(SUM('Spotify Dataset'[streams]),'Spotify Dataset'[streams]= MAX('Spotify Dataset'
  [streams]) )
```

```
1 TopSong_vsAvgVal = DIVIDE([Top_Stream_Songs]-[Average_Streams_per_year],[Average_Streams_per_year])
```

```
1 TOPSONGVSAVG = VAR x = [TopSong_vsAvgVal] return IF (x>0,FORMAT(x,"#.0%") & " " & UNICHAR(9650),FORMAT(x,"#.
  0%") & " " & UNICHAR(9660))
```

Conclusion

This Power BI dashboard provides a comprehensive, interactive view of Spotify's most streamed songs, enabling users to delve deep into the data by artist, date, and song-specific metrics. The visuals and interactions are designed to offer an intuitive and insightful experience for users looking to explore streaming trends and performance.