YouTube And Spotify Data Analysis

Overview:

The “YouTube and Spotify Data Analysis” project is an exploration of user behaviour and trends on two of the most popular streaming platforms: YouTube and Spotify. By leveraging data from these platforms, this analysis aims to uncover valuable insights into user preferences, content trends, and engagement patterns.

Technologies Used:

- Python: Python was used for data preprocessing, analysis, and visualization. Libraries such as Pandas, NumPy, and Matplotlib were utilized for these tasks.
- SQL: SQL queries were employed to extract and manipulate data from the MySQL database, which serves as the primary data source.
- MySQL: MySQL was used to store and manage the structured data, making it accessible for analysis and reporting.
- Tableau: Tableau was utilized to create interactive and insightful data visualizations, allowing for a better understanding of the analysed data.
- Power BI: Power BI was used to generate interactive reports and dashboards, enabling stakeholders to explore the project’s findings.

Project Highlights:

- Data Preparation: Describe any significant data preprocessing steps, such as data cleaning, transformation, or feature engineering.
- SQL Queries: Highlight key SQL queries or operations performed on the database.
- Visualization: Mention the main visualizations created using Tableau and Power BI, and how they contribute to the project’s objectives.
- Insights: Summarize the key insights or findings derived from the analysis.

Folder Structure:

- DataBase : This folder contain the YouTube and Spotify Data.

- Power Bi : This folder contains the 'POWER BI' works for visualizations.

- Python Work : This folder contains the 'PYTHON WORK' for cleaning the DataBase.
- SQL Work : This folder contains the 'SQL WORK' .
- Tableau DashBoard : This folder contains the 'TABLEAU WORK' for visualizations.
- Cleaned DataBase : This folder contains the cleaned data which we use for SQL Work.

SQL WORKS (Some of SQL Queries) –

1. list of unique Artist list

   Query : select distinct Artist from Spotify_Youtube;

2. Count total number of Unique Artist

   Query : select count(distinct Artist) as Artist from Spotify_Youtube;

3. Cout the number of tracks for each album

   Query : select Album_type ,(count(Track)) as 'Total Tracks' from Spotify_Youtube group by Album_type

4. Total Album

   Query : select sum(totaltracks) as totaltracks from (select Album_type , count(*) as totaltracks from Spotify_Youtube group by Album_type) as subquery;

5. Album Contribution

   Query : select Album_type, count(*) as 'Total Tracks' , concat(cast(((count(*)*1.0 / (select sum(totaltracks) as totaltracks from (select count(*) as totaltracks from Spotify_Youtube) as subquery) *1.0)*100)as decimal(10,2)) , '%') as Precentage from Spotify_Youtube group by Album_type

6. Top 10 Artist basis on Views On YouTube

Query : select top 10 Artist , sum(Views) as 'Total number of views' from Spotify_Youtube group by Artist order by sum(Views) desc

7. Top 10 Artist basis on Stream On Spotify

   Query : select top 10 Artist , sum(Duration_minute) as 'Total number of views' from Spotify_Youtube group by Artist order by sum(Duration_minute) desc

8. Top 10 commented songs On YouTube

   Query : select top 10 Track , Artist, Views , Album,Uri , Channel, Comments as 'Total number of Comments' from Spotify_Youtube order by Comments desc

9. Top 10 Liked songs On YouTube

   Query : select top 10 Track , Artist, Album,Uri , Channel, Likes as 'Total number of Likes' from Spotify_Youtube order by Likes desc

10. Top 10 channel Basis on views

    Query : select top 10 Channel,sum(Views) as 'Total number of views' from Spotify_Youtube group by Channel order by sum(Views) desc

11. Top 10 highest duration songs

    Query : select top 10 Track ,concat(cast(Duration_minute as decimal (10,2)) ,'Minute')as Total_Minute from Spotify_Youtube group by Track,Duration_minute order by Duration_minute desc

12. Total Licenced songs

    Query : select count(Licensed) as 'Total Licensed Songs' from Spotify_Youtube where Licensed=1

13. Total Unlicenced songs

    Query : select count(Licensed) as 'Total UnLicensed Songs' from Spotify_Youtube where Licensed=0

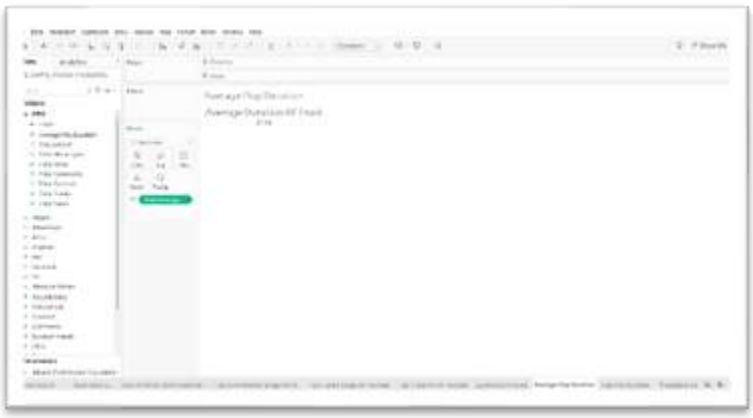
14. Average time duration for Tracks

    Query : select concat(cast((sum(Duration_minute) / count(*)) as decimal(10,2)) ,' Minute') as 'Average Time Duration' from Spotify_Youtube

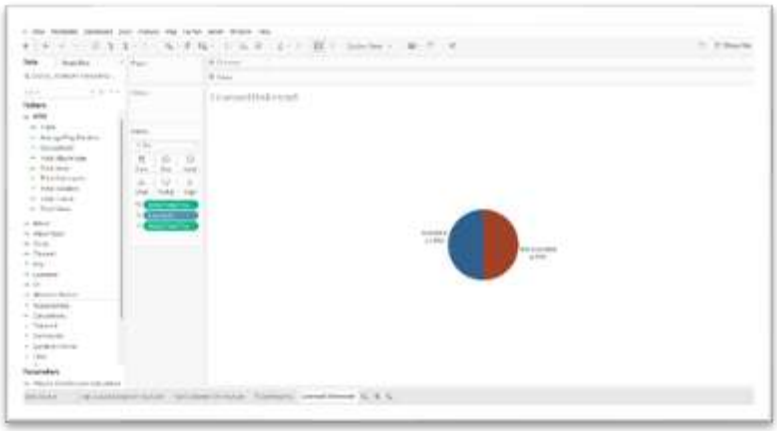
Creating Visualizations:

1. Tableau Visualizations

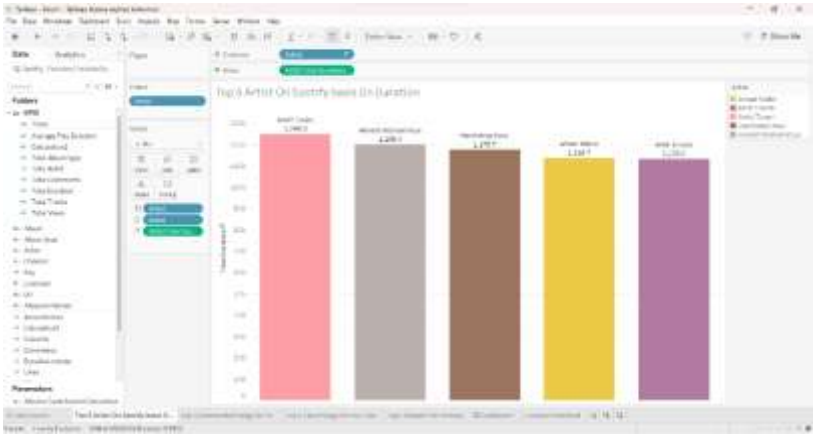
   a. Average Play duration



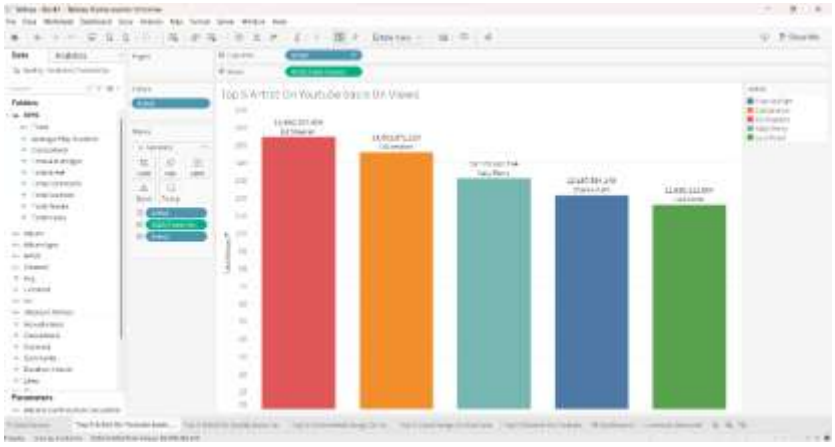
   b. licensed And Unlicensed track



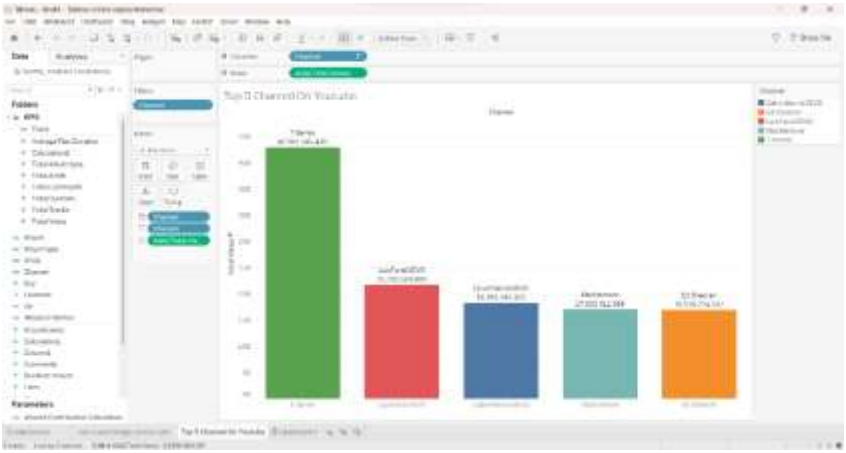
   c. Top 5 artist on Spotify



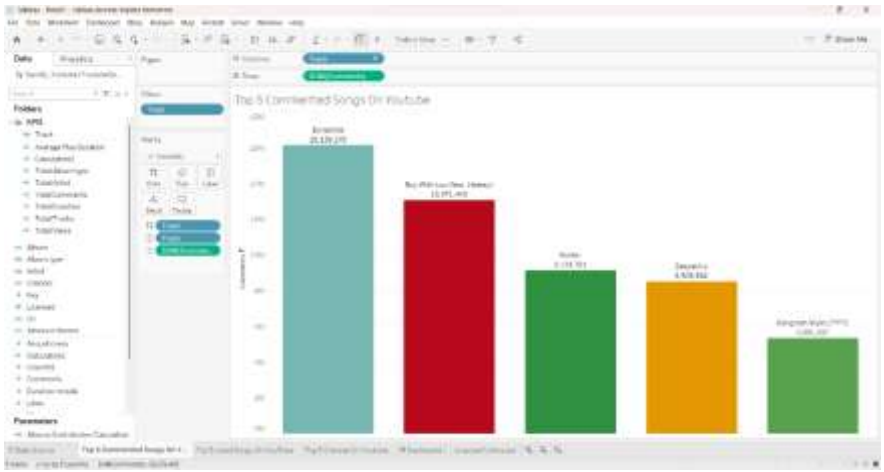
   d. Top 5 artist on YouTube



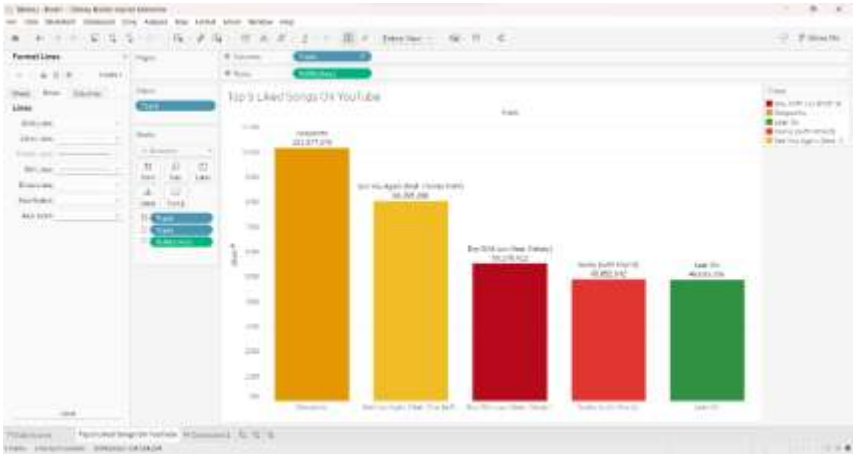
e. Top 5 channel on YouTube



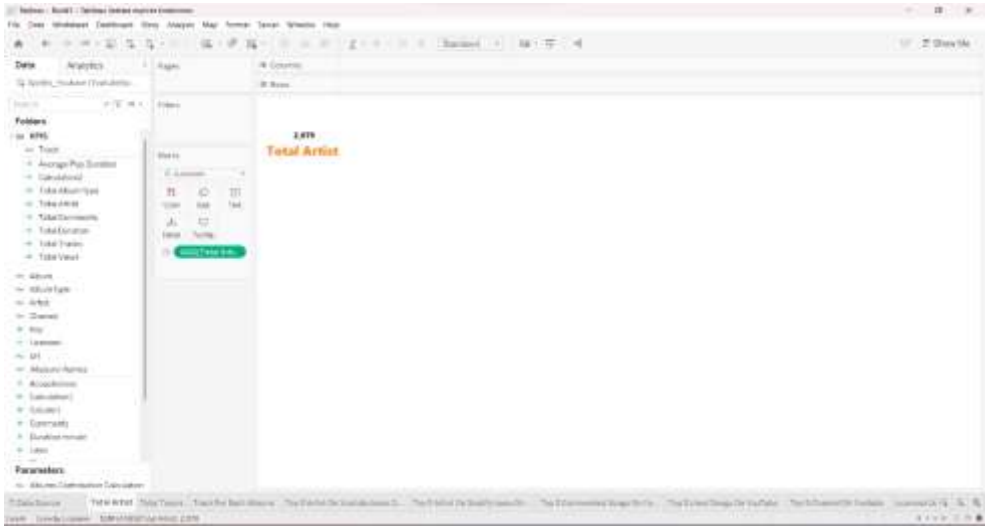
f. Top 5 commented songs



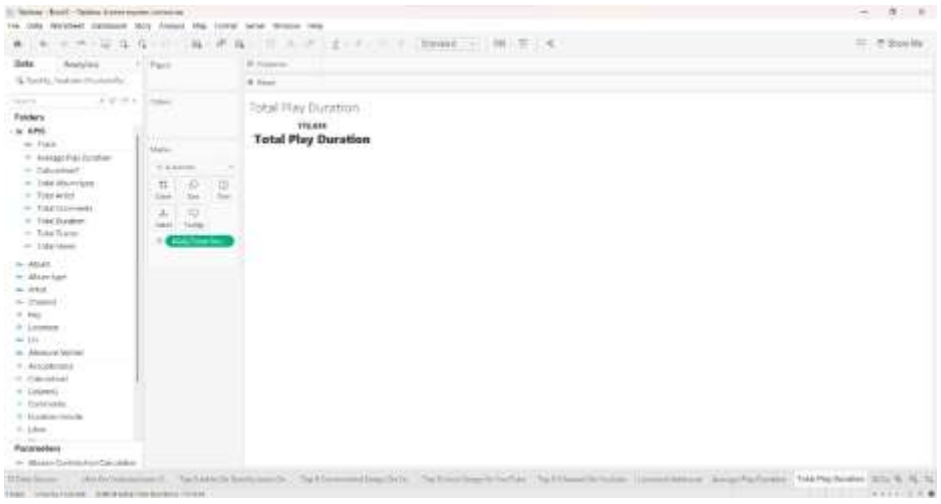
g. Top 5 liked Songs



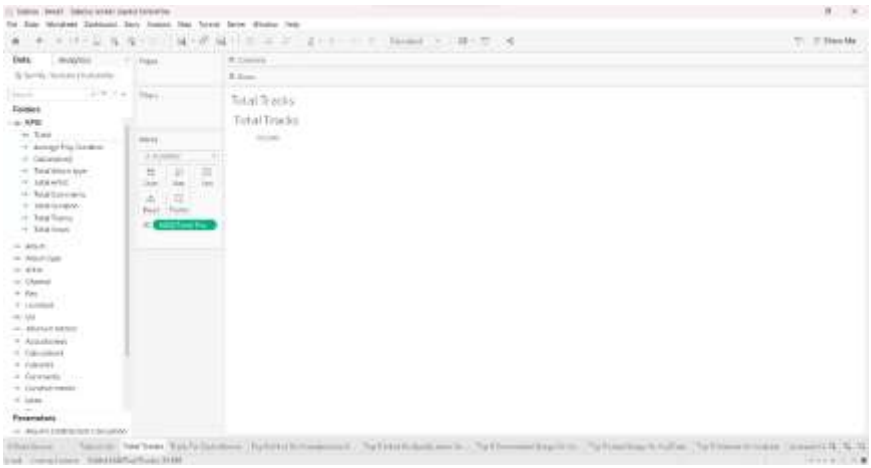
h. Total Artist



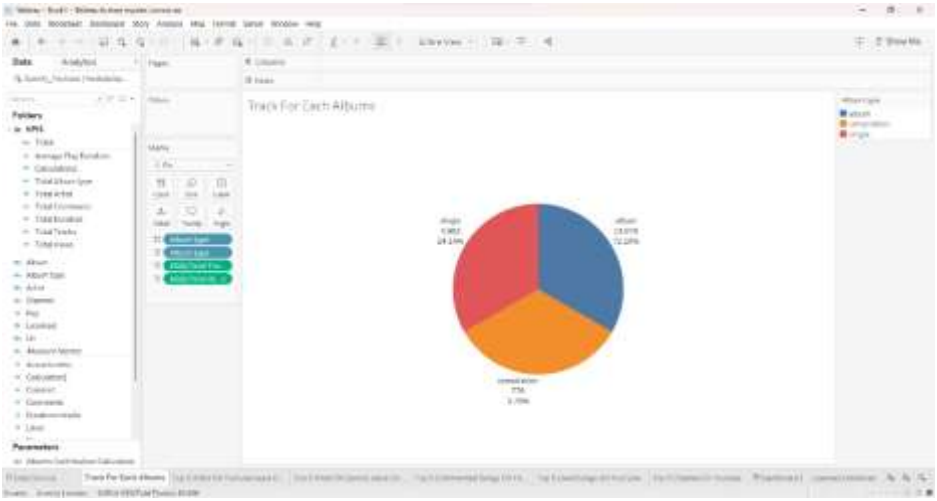
i. Total play duration



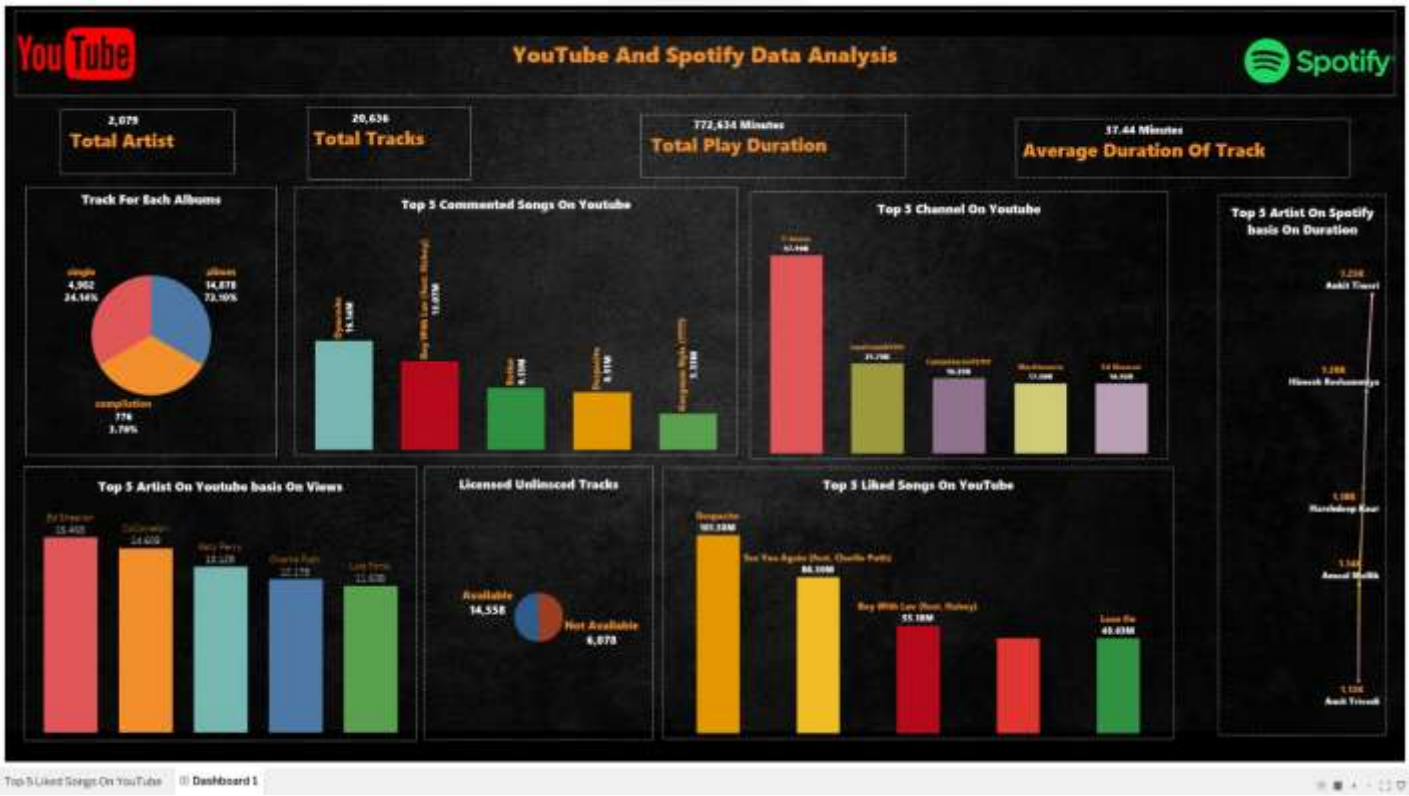
j. Total Tracks



k. Track of each Album

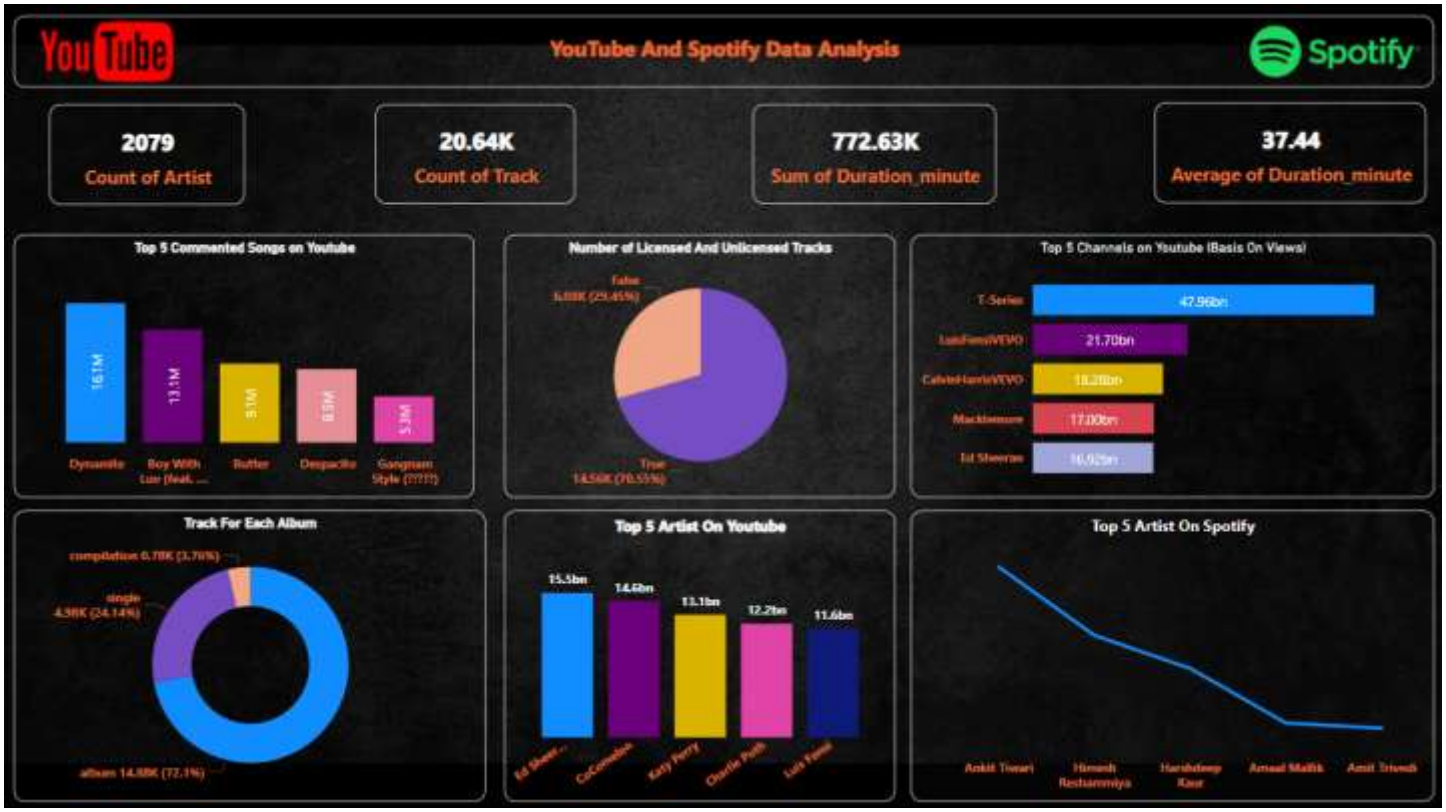


L. Final Dashboard



It’s Dynamic Dashboard

2. Power BI Dashboard



It’s Dynamic Dashboard