

A close-up photograph of a DJ's hands. The left hand is adjusting a knob on a black DJ mixer, while the right hand is positioned over a white electronic keyboard. The DJ is wearing a red and blue plaid shirt. The image has a semi-transparent dark overlay with white text.

Chinook [Music Data] Data Analysis By [SQL , EXCEL]

Introduction And About This Data

- This project aim to analyze Chinook Data from 2021 to 2025.
- I use tools to analyze this data such as (SQL , EXCEL , Power Query) were used to explore data and extract insights .
- The Goal is to provide Recommendations that help to increase sales.



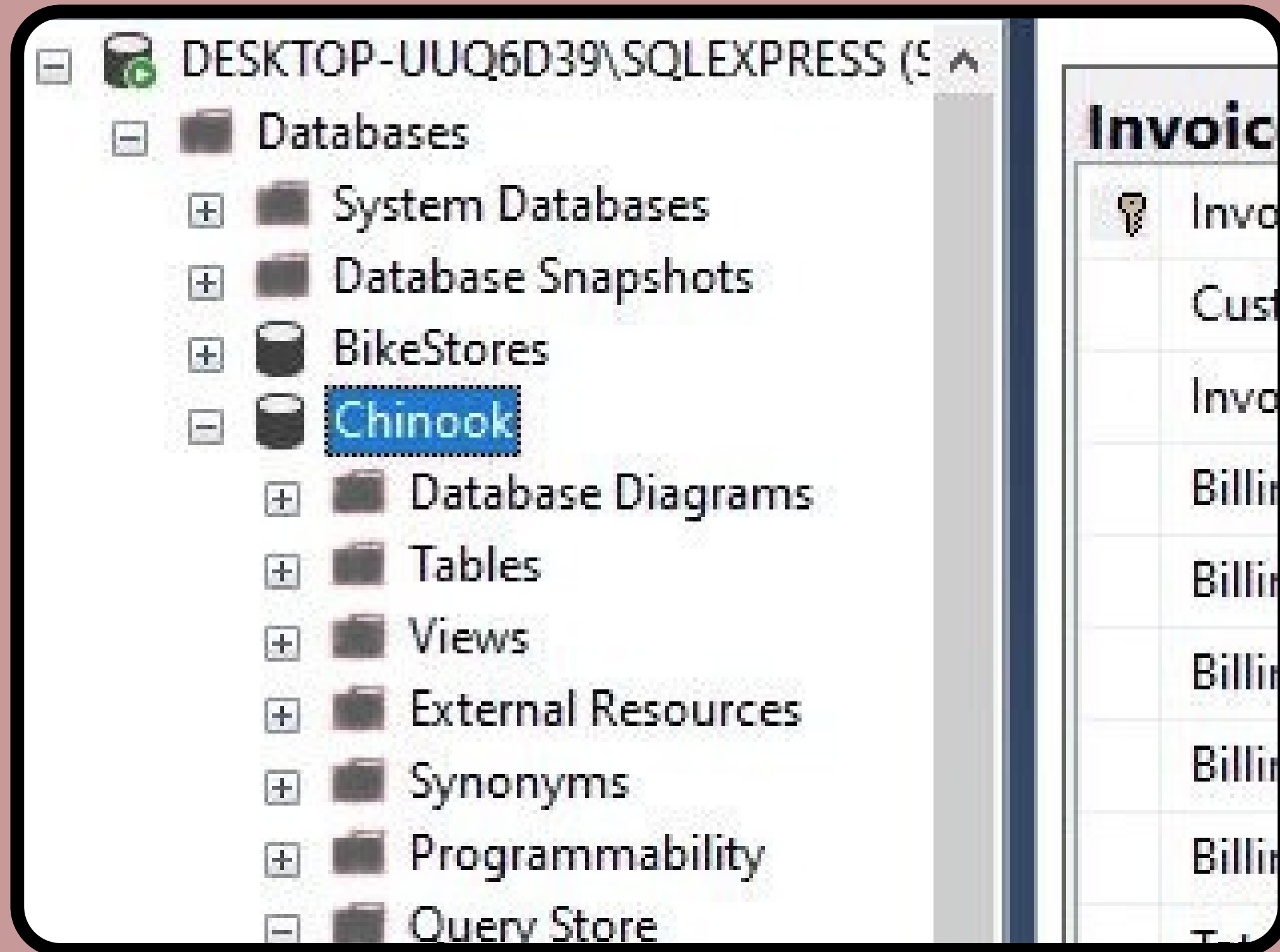
Questions :-

- What are the total sales over the months?
- What are the total sales for each genre and the top 10 of them?
- What is the number of tracks in each playlist type?
- What is the number of media types in each playlist?
- Which country has the highest sales?
- Who are the top 10 albums in terms of total sales?
- What is the total number of tracks in each genre?
- What are the sales for each artist and the number of each track, so we can see which artist is most popular?
- How many employees are there in each department?
- Who is the manager for each employee and how many employees are there for each manager?
- The number of customers per employee and the highest total sales are higher than average.

Steps:-

1) Use SQL Server






- To load Chinook data before using in Excel .



Steps:-

2) In Excel using Power Query

- I made the Fact and Dimension tables to build Star Schema
- To Remove Duplicated data
- To Write SQL Queries

	DimArtist
	DimCustomer
	DimEmployee
	DimGenre
	FactTable
	DimMediaType
	DimPlaylist
	DimPlaylistTrack
	DimTrack

Steps:-

2) In Excel using Power Query

- I made the Fact and Dimension tables to build Star Schema
- To Remove Duplicated data
- To Write SQL Queries

CTE5 (Self Join Between Employee AND M

```
let
    Source = Sql.Database("DESKTOP-UUQ6D39\SQLEXPRESS", "Chinook", [Query=" #(1f)
        #(1f)WITH EmployeeManger AS (
            #(1f)
            SELECT e.EmployeeId,
                e.FirstName + ' ' + E.LastName AS EmployeeName,
                e.Title AS EmployeeTitle,
                m.EmployeeId AS ManagerId,
                m.FirstName + ' ' + m.LastName AS ManagerName
            FROM Employee AS e
            inner JOIN Employee AS m
            ON e.ReportsTo = m.EmployeeId

            SELECT EmployeeName,
                EmployeeTitle,
                ManagerName
            FROM EmployeeManger
            ORDER BY EmployeeName
        "])
in
    Source
```

Steps:-

2) In Excel using Power Query

- I made the Fact and Dimension tables to build Star Schema
- To Remove Duplicated data
- To Write SQL Queries

Wind2 (Rank Total Sales In Media)

```
let
    Source = Sql.Database("DESKTOP-UUQ6D39\SQLEXPRESS", "Chinook",
        [Query="
            SELECT mt.Name,
                   count(distinct(t.TrackId)) AS Num_Of_Tracks,
                   SUM(inv1.Quantity * inv1.UnitPrice) As TotalSales ,
                   AVG(inv1.Quantity * inv1.UnitPrice) AS AvrageSales,
                   rank() over ( order by count(distinct(t.TrackId)) DESC ) AS Rank,
            FROM MediaType mt
            inner join Track t
            on mt.MediaTypeId = t.MediaTypeId
            inner join InvoiceLine inv1
            on inv1.TrackId =t.TrackId
            group by inv1.Quantity,inv1.UnitPrice,mt.Name

        "])
in
    Source
```

Data Model

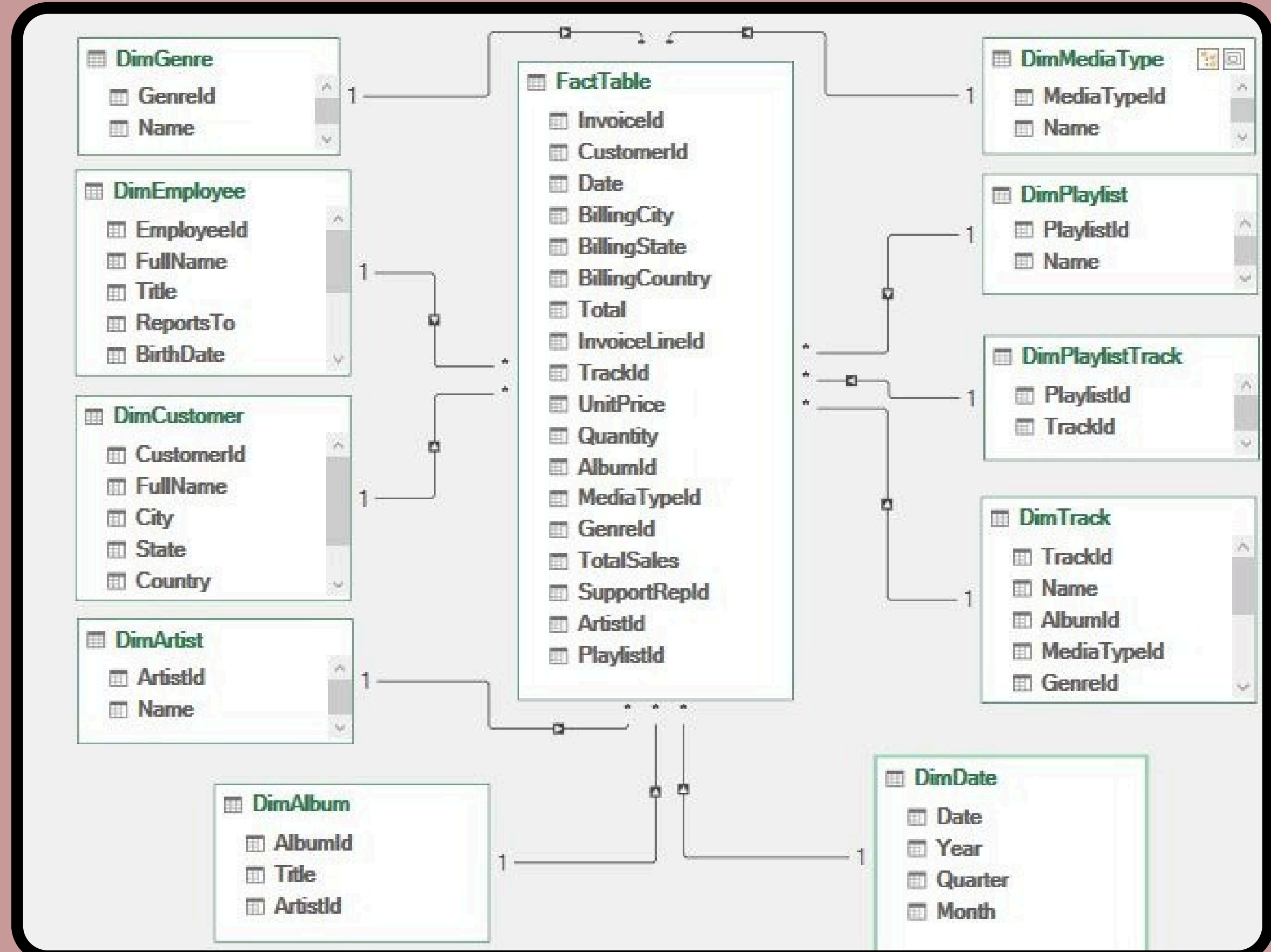
[Star Schema]



Power Pivot :-

Using Power Pivot To build Data Model [Star Schema]

04



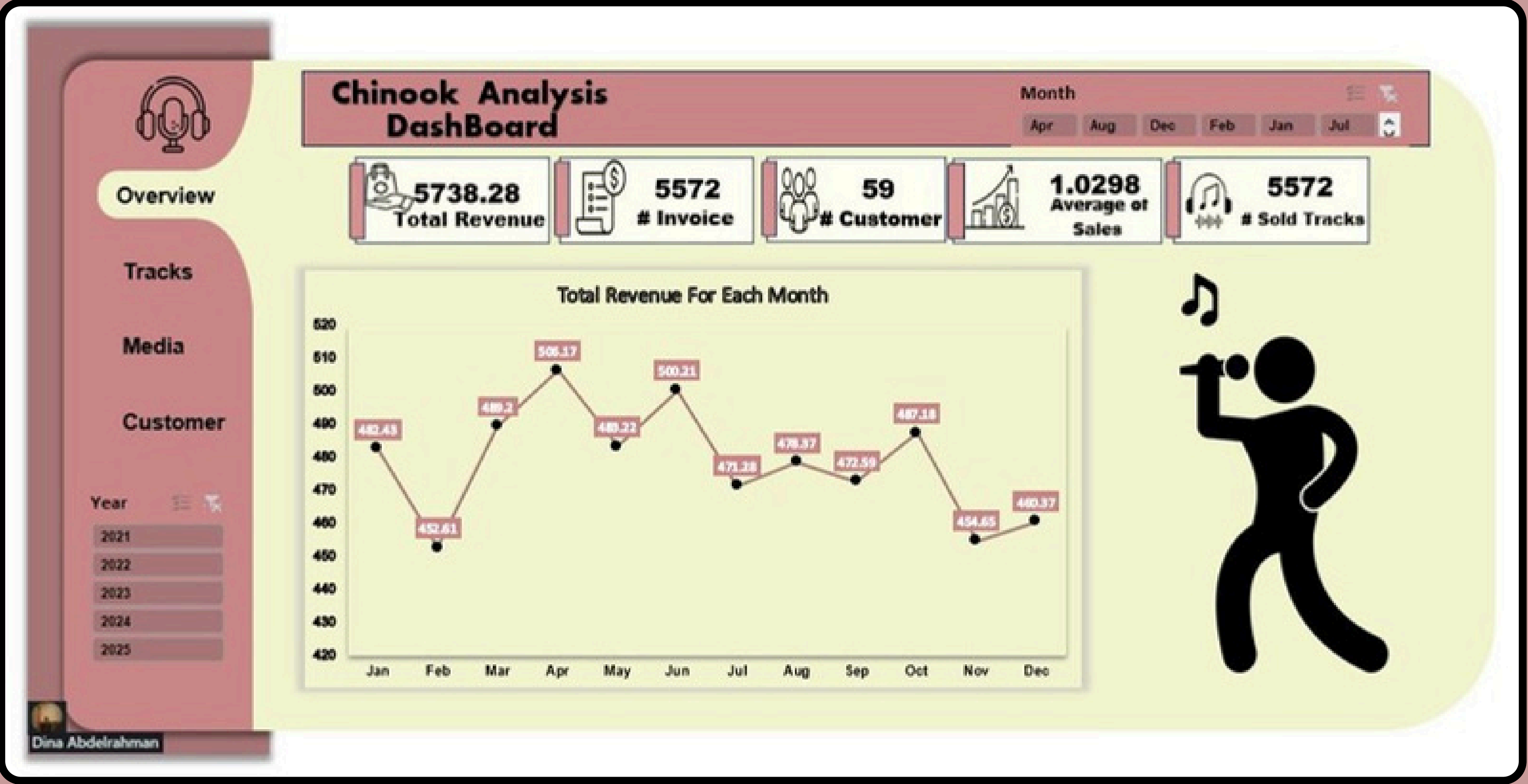
Pivot Tables:-

[illegible]

Dashboards



Dashboard Of Overview :-

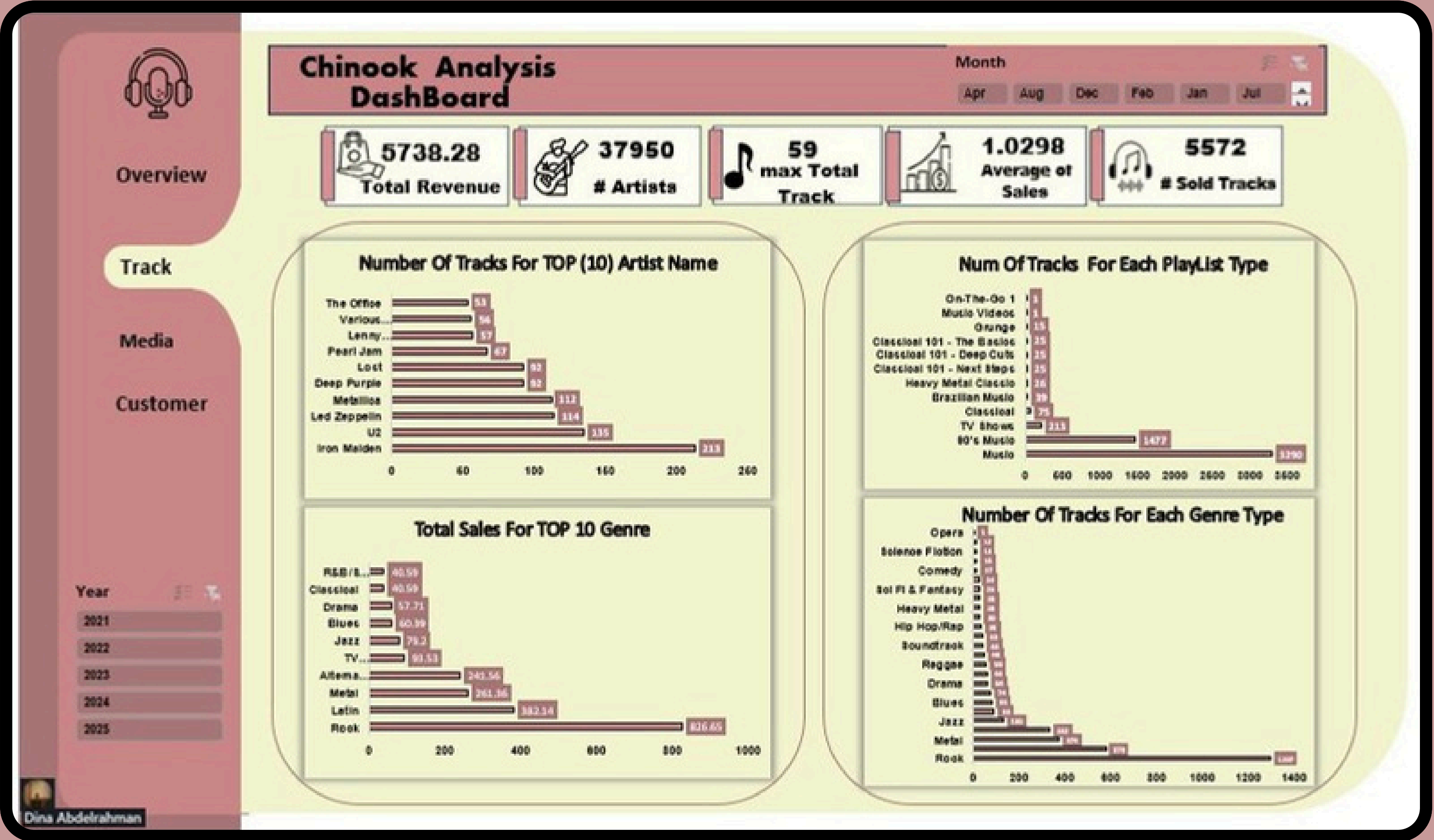


Total Revenue For Each Month

- The highest sales over the years were in 2022, and the highest month with income was January. Then, they began to decline in 2023, increase in 2024, and declined in 2025.

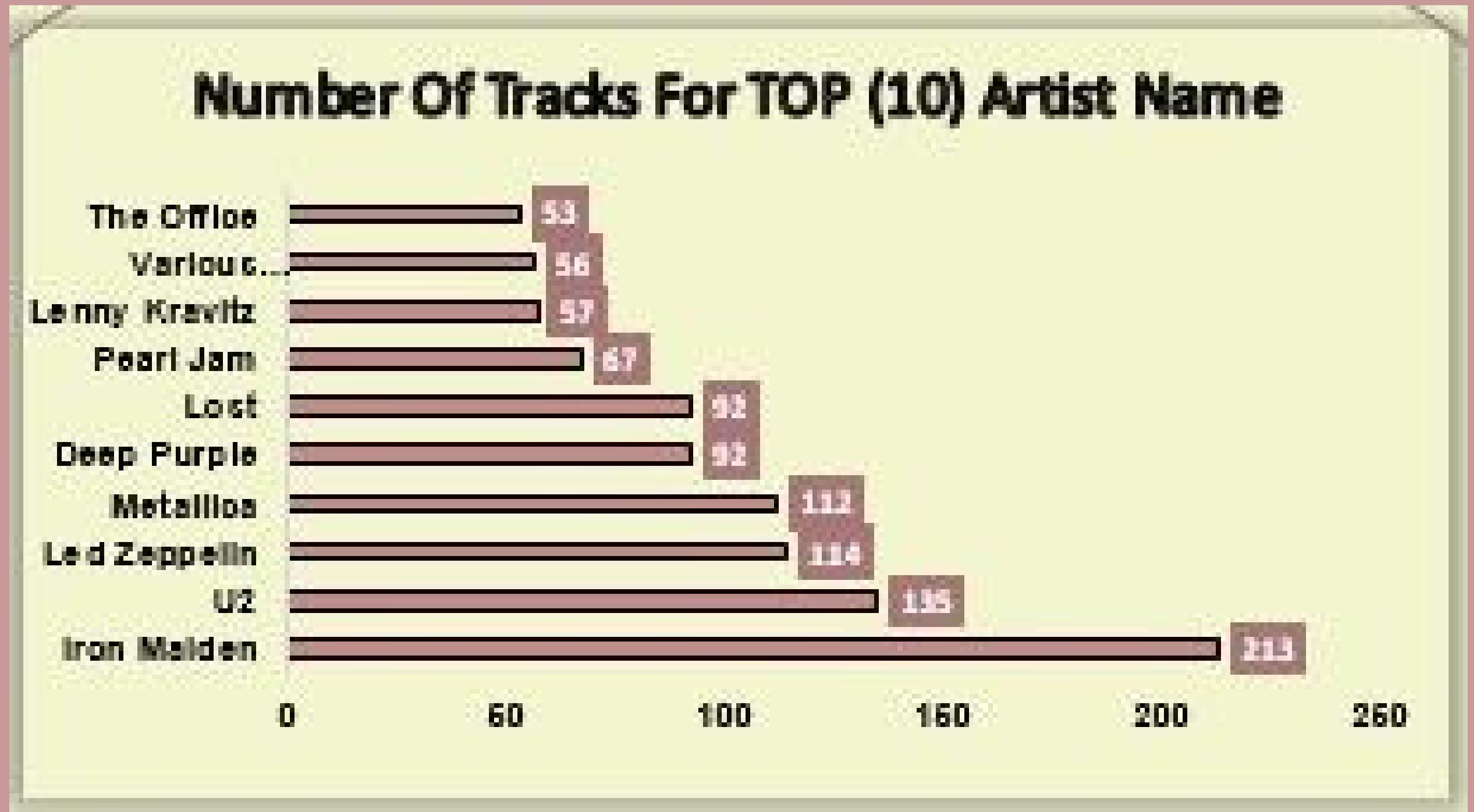


Dashboard Of Track :-



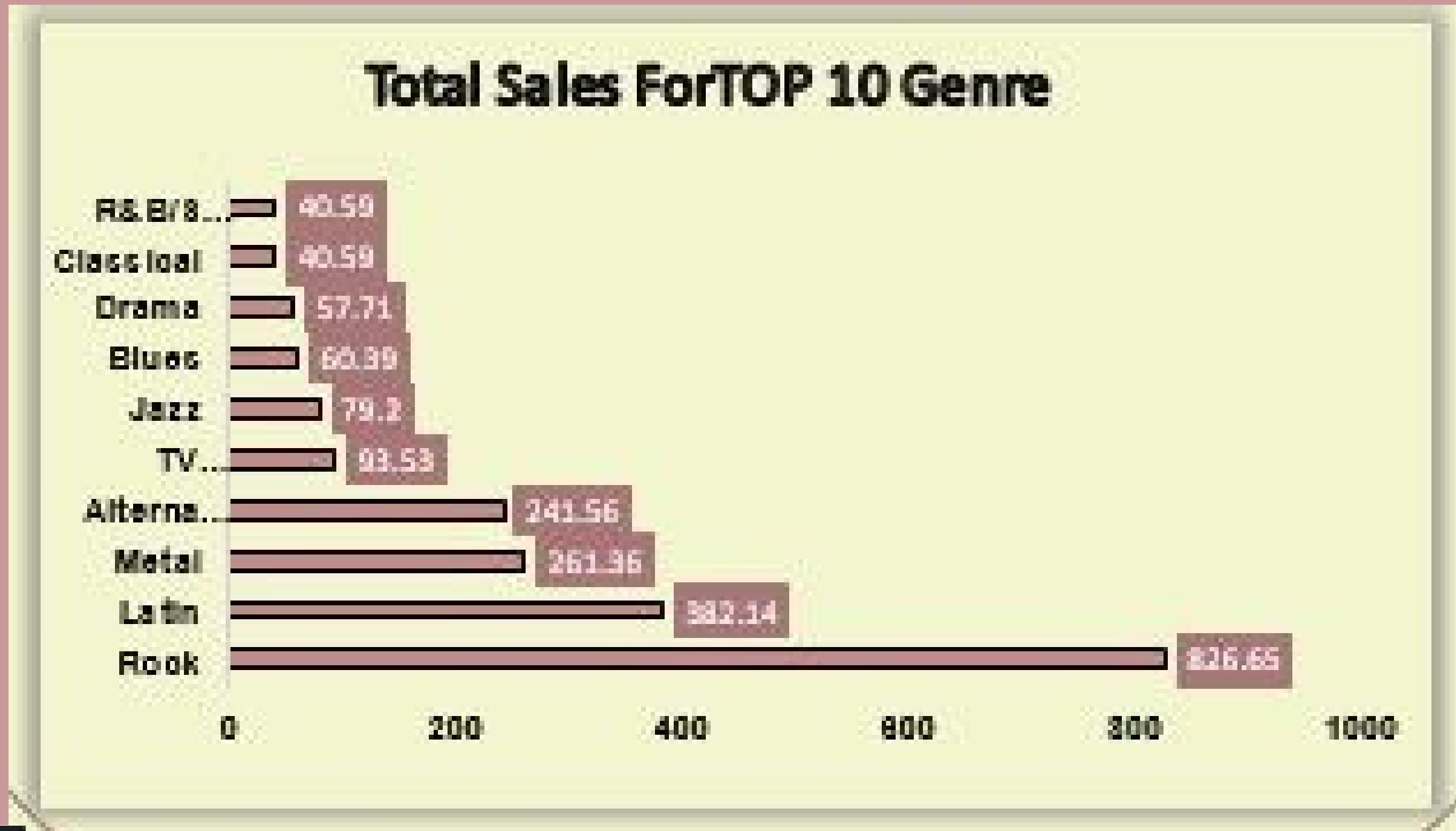
Number Of Tracks For TOP (10) Artist Name

- Top 10 Artist by number of Tracks each, the highest of which is Iron Maiden



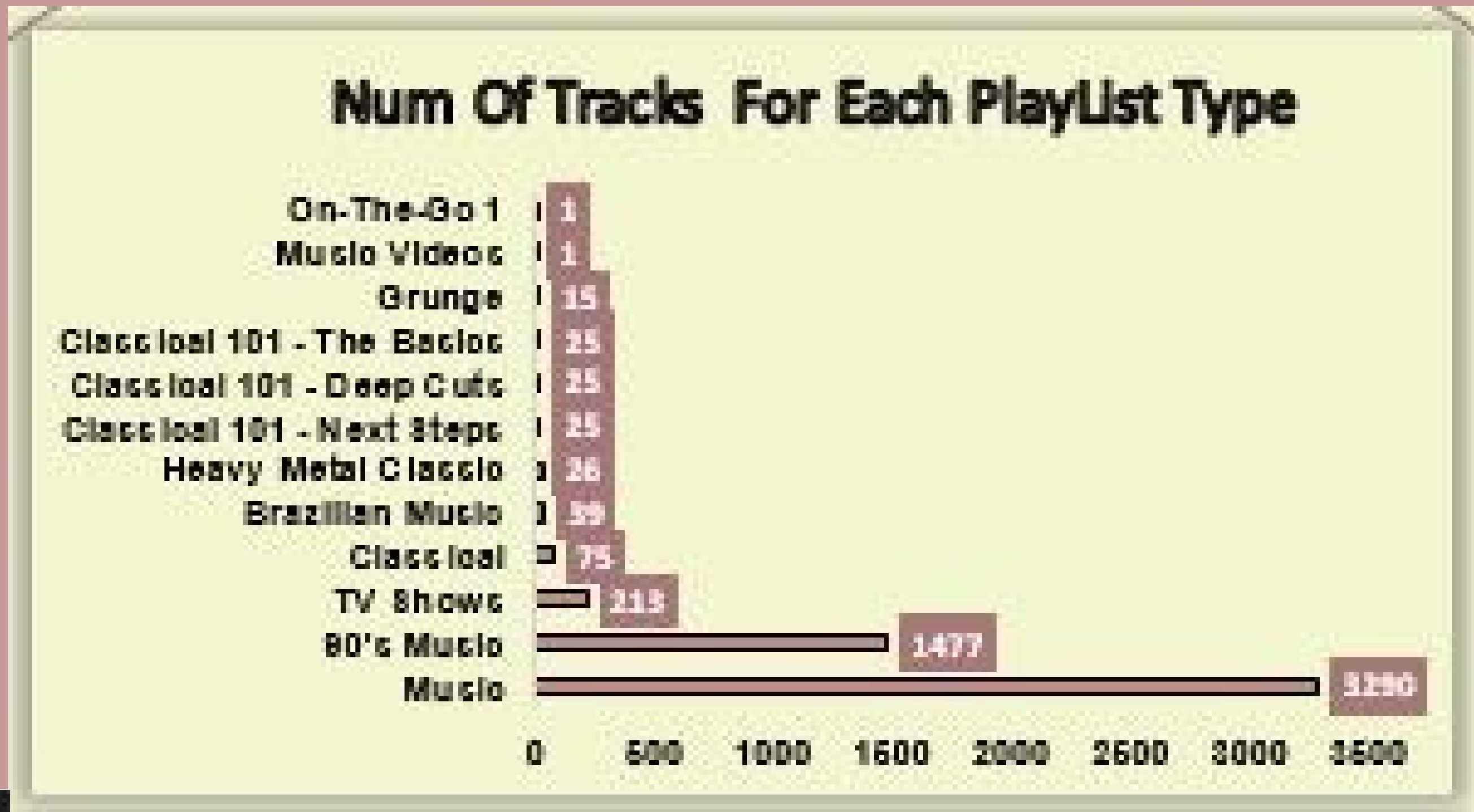
Total Sales For TOP 10 Genre

- The Top 10 genres by total sales, the highest of which is rock, followed by Latin.



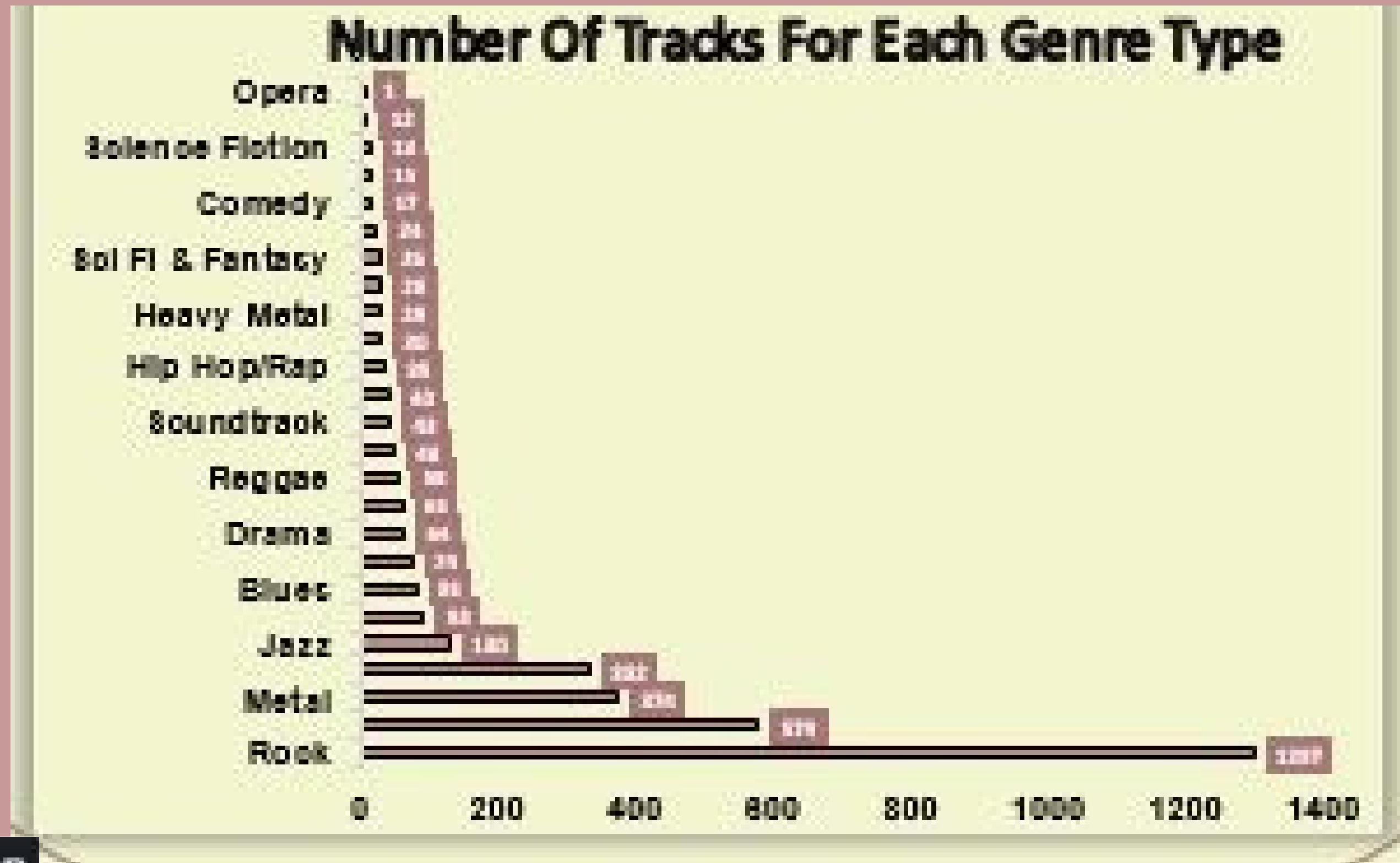
Num Of Tracks For Each PlayList Type

- Each type of playlist has a number of Tracks within it. The playlist with the highest number of Tracks are Music 3290, then 90's Music 1477

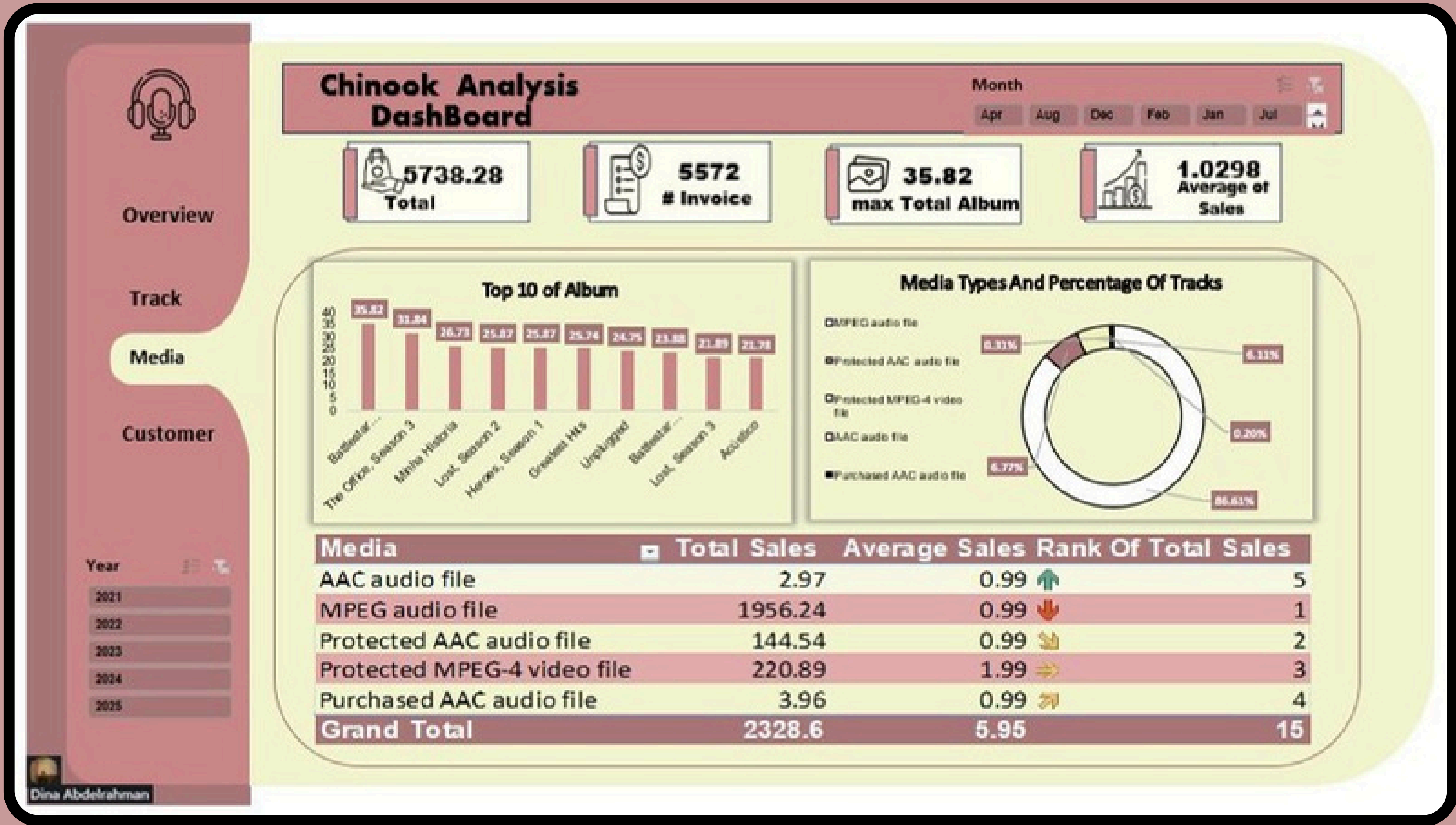


Number Of Tracks For Each Genre Type

- Each genre has a number of tracks within it, the highest being Rock 1297, followed by Latin 579, then Metal 374.

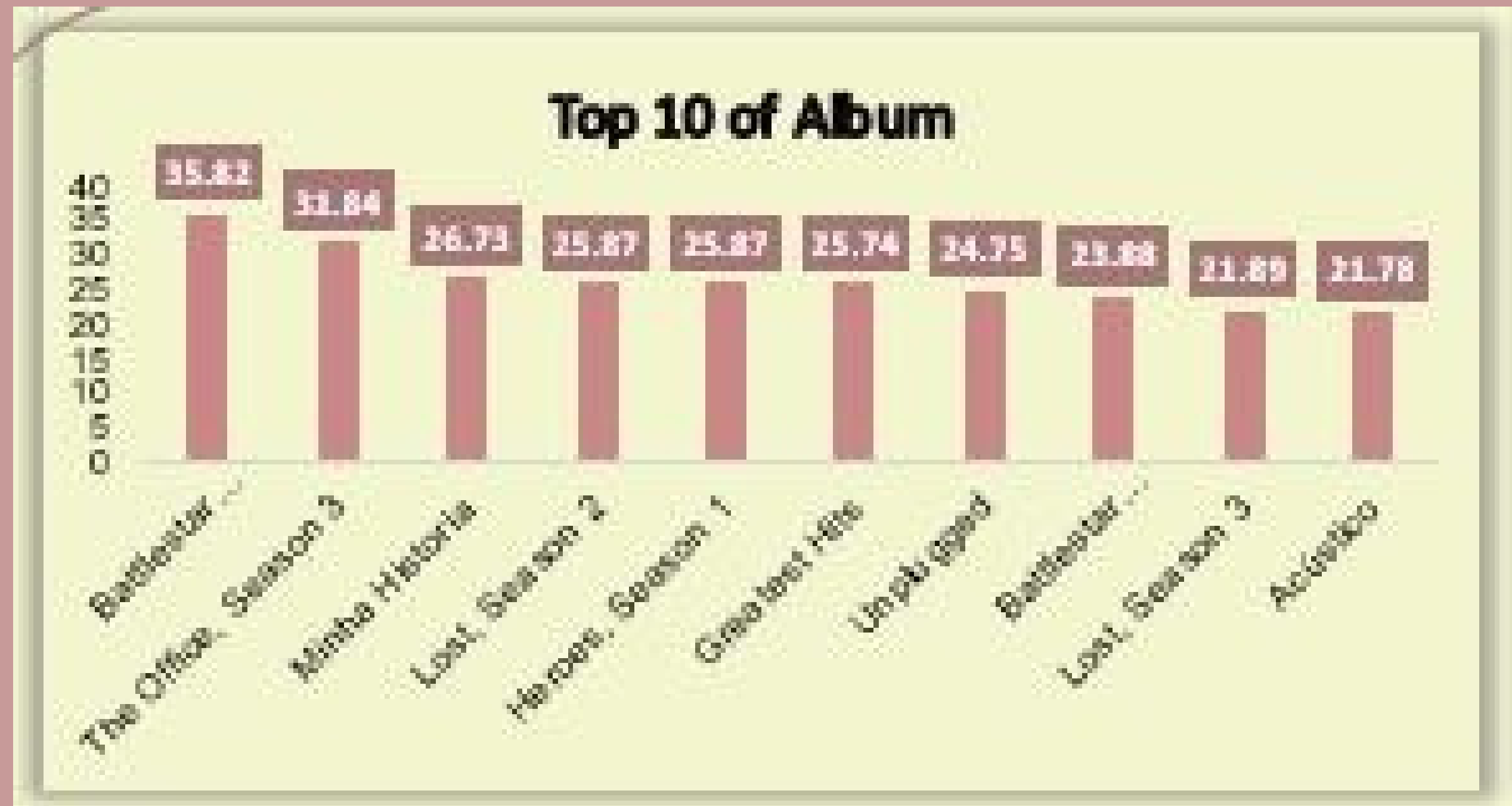


Dashboard Of Media :-



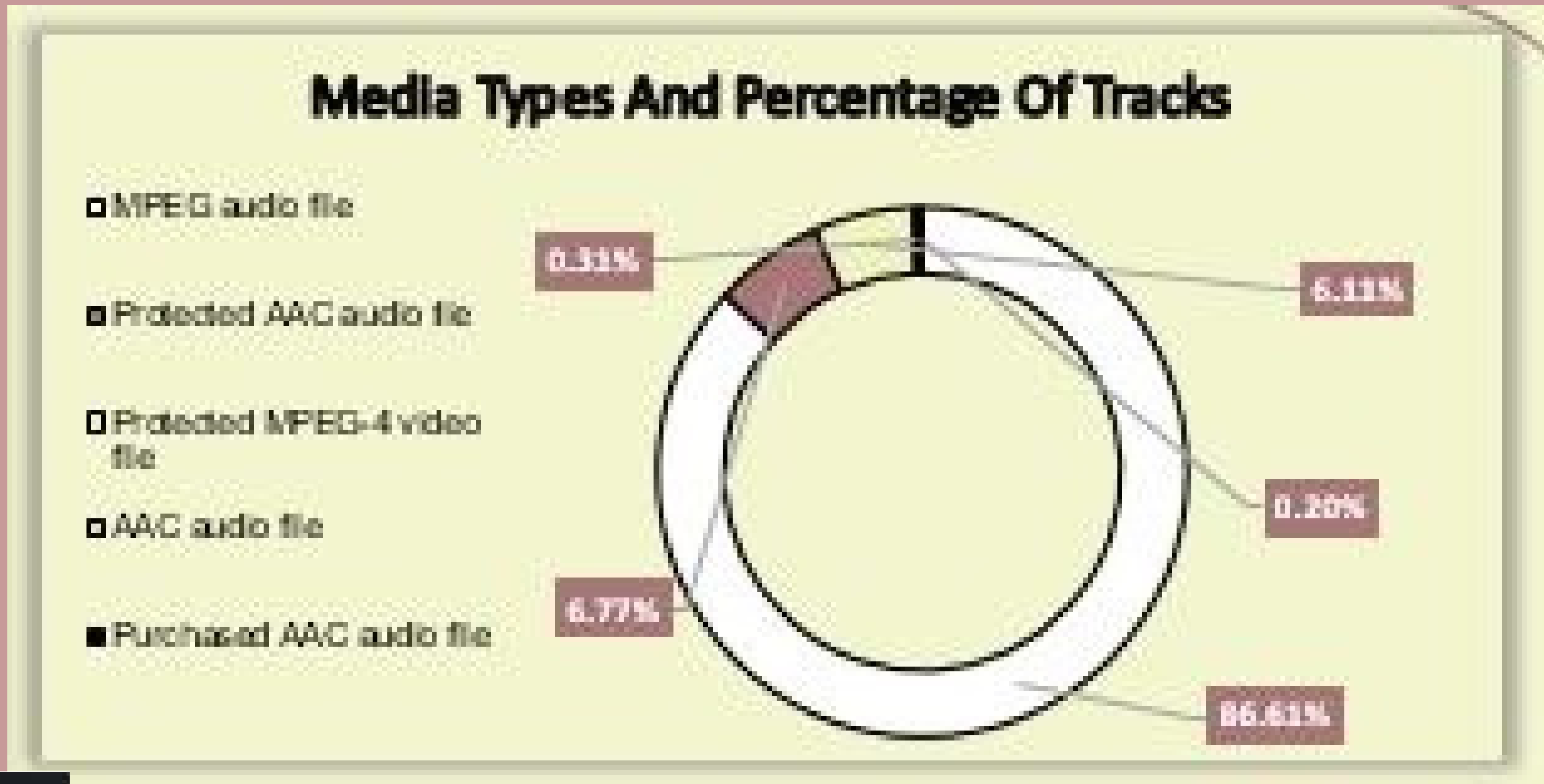
Top 10 of Album

- The Top 10 albums in terms of total sales, the highest of which is **Battlestar Galactica (Classic), Season 1**, 35.82, followed by **The Office, Season 3**, 31.84, and then the rest, as shown in the image.








Media Types And Percentage Of Tracks

- The percentage of each type of media in terms of the number of tracks it contains, and the highest type is MPEG audio file 86.61%.

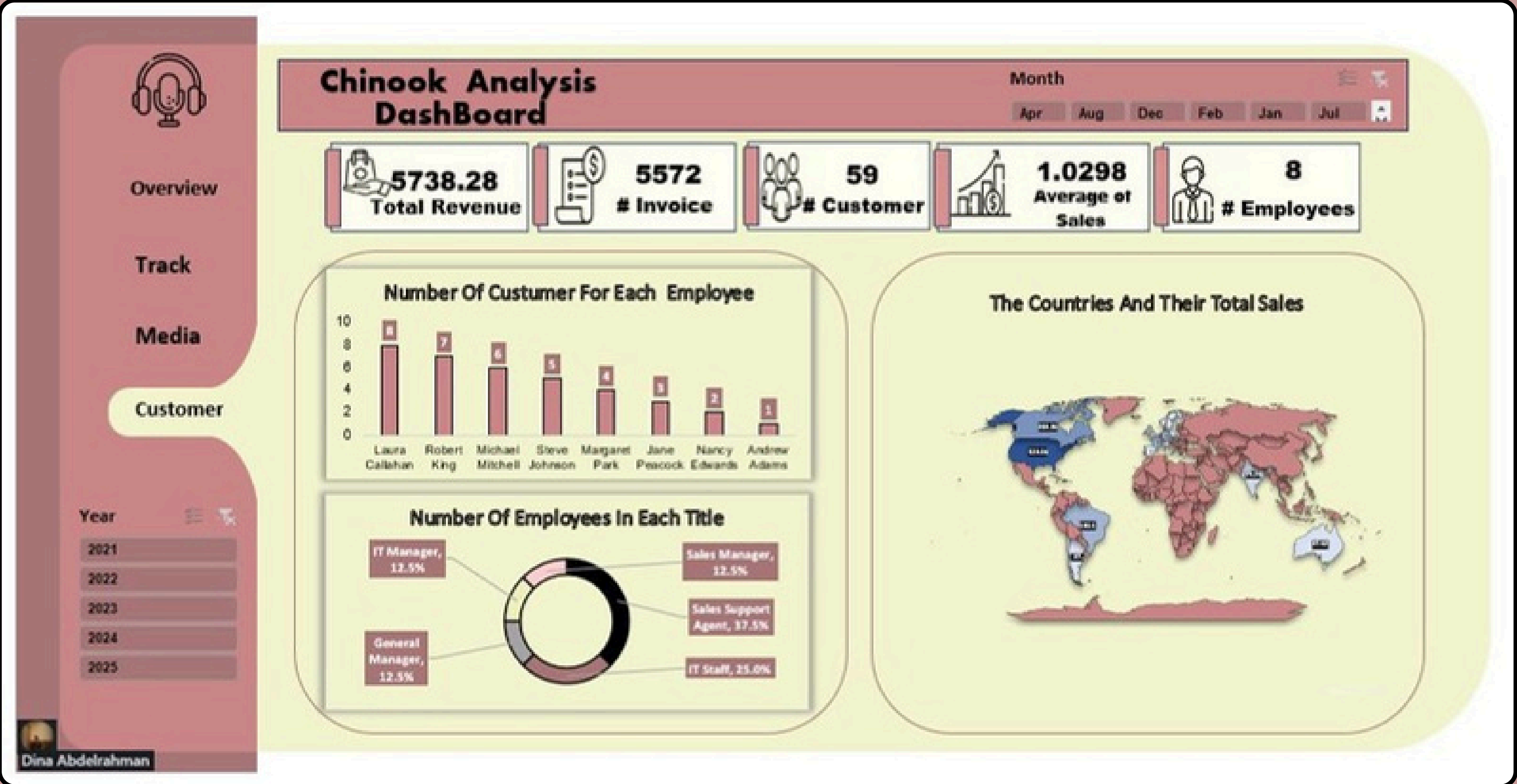


Rank Total Sales In Media

- Ranking is based on the total sales in relation to the average of each of them.

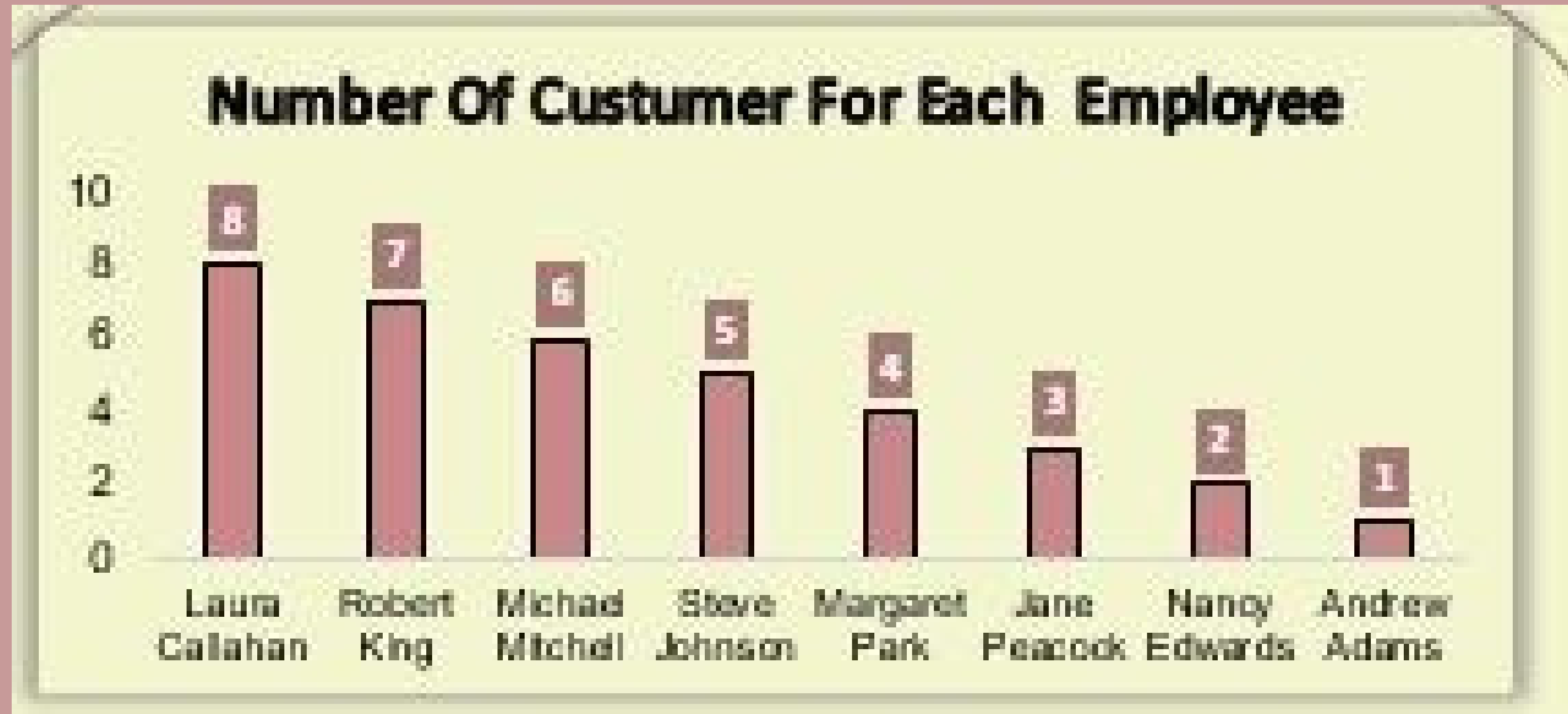
Media	Total Sales	Average Sales	Rank Of Total Sales
AAC audio file	2.97	0.99 	5
MPEG audio file	1956.24	0.99 	1
Protected AAC audio file	144.54	0.99 	2
Protected MPEG-4 video file	220.89	1.99 	3
Purchased AAC audio file	3.96	0.99 	4
Grand Total	2328.6	5.95	15

Dashboard Of Customer :-



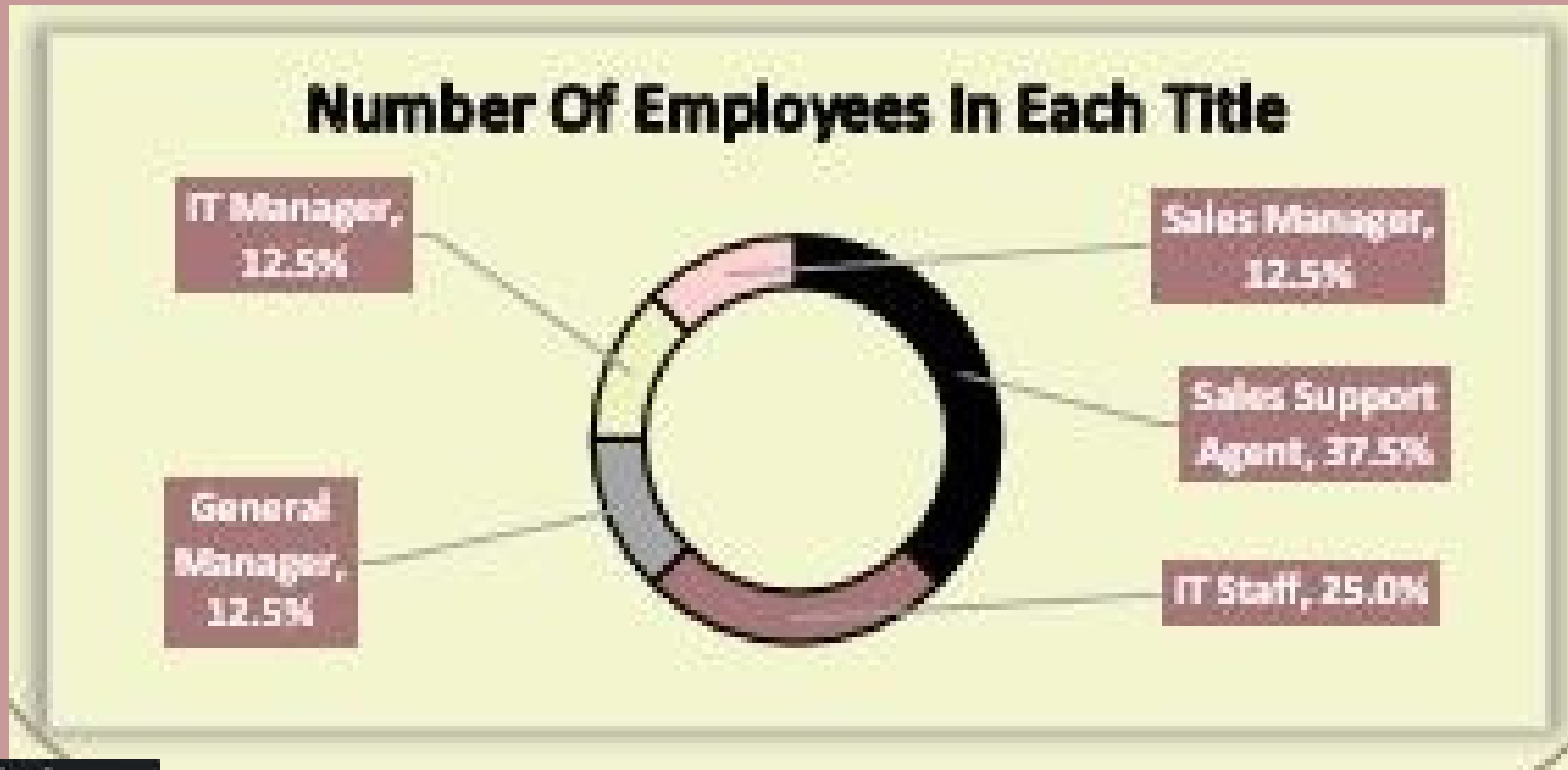
Number Of Customer For Each Employee

- Each employee has a number of customer, and the largest employee, **Laura Callahan** and has 8 clients.



Number Of Employees In Each Title

- The countries with the highest total sales for each are the USA (523.06), Canada (303.96), and France (195.1).



The Countries And Their Total Sales

- The highest sales over the years were in 2022, and the highest month with income was **January**. Then, they began to decline in 2023, increase in 2024, and declined in 2025.



Recommendations

- Choosing the right month to release the album or track, for example, July was a month that achieved sales in 2022.
- I see which songs are achieving high sales and I work on increasing their distribution.
- I see the sales of each singer so that I know which singer is popular among the audience and focus on him.
- The most important factor these days is social media in terms of advertising and promoting any new album.
- I try to see what kind of track the generation likes and I start increasing the opportunities to listen to them through social media.
- I put the element of surprise as if it were a competition, so that I create interaction on social media, and consequently, it will increase the number of people listening to the song after that.
- For the less popular track, I try to increase the chances of them being performed at concerts and getting sung, so people will start to know them.
- I focus on which age group is most interested in which type of track, and therefore I intensify efforts and work on these types.
- I see what kind of track are popular in each country in order to increase the number of tracks in them

A close-up photograph of a person's hands playing an acoustic guitar. The left hand is positioned on the fretboard, holding a black capo across the strings. The right hand is visible in the background, strumming the strings. The guitar has a light-colored body and a dark fretboard. The person is wearing a red, white, and blue plaid shirt. The background is a warm, out-of-focus wooden surface.

Thank you