SQL Showcase | MySQL Album Catalog Database

Introduction

This was from a freelance project, where I was tasked to:

- Look at the overall structure of the MySQL database and convert it to Data Frames
- Perform some exploratory data analysis
- Use MySQL functions, such as JOIN, GROUPBY and HAVING.
- Look at the Song database and find the longest songs
- Create data visualizations

Findings

After connecting to the remote MySQL database. I used some basic MySQL functions to combine two databases into one. Using Select, From, Left Join & On, MySQL functions to reach the result displayed below.

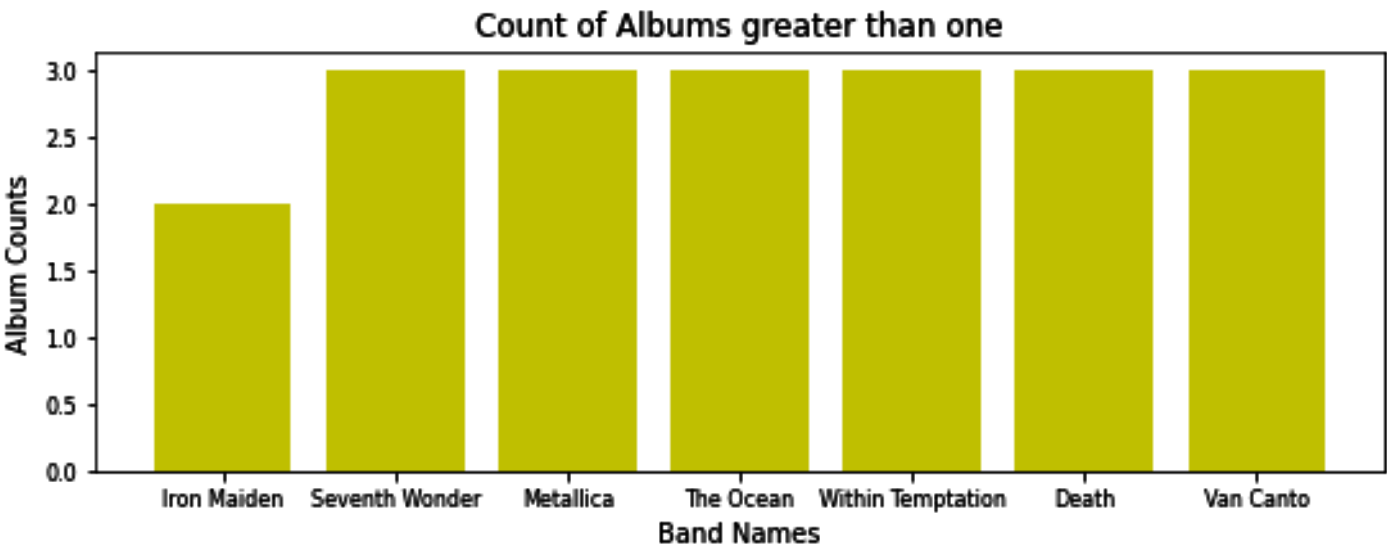|	id	name	id	name	release_year	band_id
0	1	Iron Maiden	1.0	The Number of the Beasts	1982.0	1.0
1	1	Iron Maiden	2.0	Power Slave	1984.0	1.0
2	2	Deuce	3.0	Nightmare	2018.0	2.0
3	3	Avenged Sevenfold	4.0	Nightmare	2010.0	3.0
4	4	Ankor	NaN	None	NaN	NaN
5	5	Seventh Wonder	6.0	Tiara	2018.0	5.0
6	5	Seventh Wonder	7.0	The Great Escape	2010.0	5.0
7	5	Seventh Wonder	8.0	Mercy Falls	2008.0	5.0
8	6	Metallica	9.0	Master of Puppets	1986.0	6.0
9	6	Metallica	10.0	...And Justice for All	1988.0	6.0

Now I want to a look at the songs database and find out the longest songs. Below is the result of the longest songs query.

	Albums	Release Year	Duration
0	Tiara	2018	9.50000
1	The Great Escape	2010	30.23330
2	Mercy Falls	2008	9.48333
3	Master of Puppets	1986	8.58333

The longest song is a little over 30 minutes from an album titled "The Great Escape". It is followed by two songs that are about 9.5 minutes long.

After finding out which album has the longest songs. I wanted to find out which bands listed in the MySQL database had more than one album. Below is the result of this query.

I wanted to find the bands that have more than one album listed in the Data Frame. Using the Left Join, Group by and Having MySQL functions.

SQL Showcase projects uses anonymous and public domain data sets from various sources.

Challenges

One major challenge that I encountered for this project was finding the chart that best displays the data. This data set is very straightforward. I was looking for different types of charts, but sometimes the simple charts are the best to use.

Conclusion

I was able to complete the given tasks that was listed in the introduction section. In hindsight, instead of searching for interesting charts. I would have saved time on choosing simple charts like the bar chart to display the results of my album count query.