BOX OFFICE MOVIE ANALYSIS

Ea **by Edwin Mbuthia**

PROJECT OVERVIEW

In this project, I conducted an exploratory data analysis of some of the top Box office movies so as to generate insights for Microsoft who want to join this industry.

 I then translated my findings into insights and even came up with recommendations that the head of Microsoft's new movie studio should use on deciding the type of movies to create.

Ea

Business Understanding

Key Points for Business Understanding:

1. Objective: Establish a successful movie studio by producing high-earning films.

2. Market Analysis: Identify top-performing film genres based on current box office earnings.

3. Genre Performance: Analyze data to determine which genres consistently achieve high revenue.

4. Actionable Insights: Use findings to guide the studio in selecting genres for new movie projects.

5. Strategic Alignment: Ensure the chosen genres align with market demand and audience preferences to enhance the likelihood of commercial success.

Data Understanding

The data used in this project is from two sources:

1. Data\bom.movie_gross.csv - This is a csv file which mainly contains information on Movie titles, the year the movies were released, the studio that created the Movie and also gross earnings made from movies both domestically and foreign. It contains `5782 rows and 6 columns`.

2. Data\tn.movie_budgets.csv - Is also a csv file similar to the one above only that it has additional information on the movie production budget and the worldwide earnings of the Movies. It contains `3387 rows and 5 columns`.

Data Analysis

In this file Data\bom.movie_gross.csv,
df.groupby(["studio", "year"])["domestic_gross"].sum()
Here I grouped the dataset by; The Studio that produced the movie, the year the movie was produced and the domestic gains for that year.
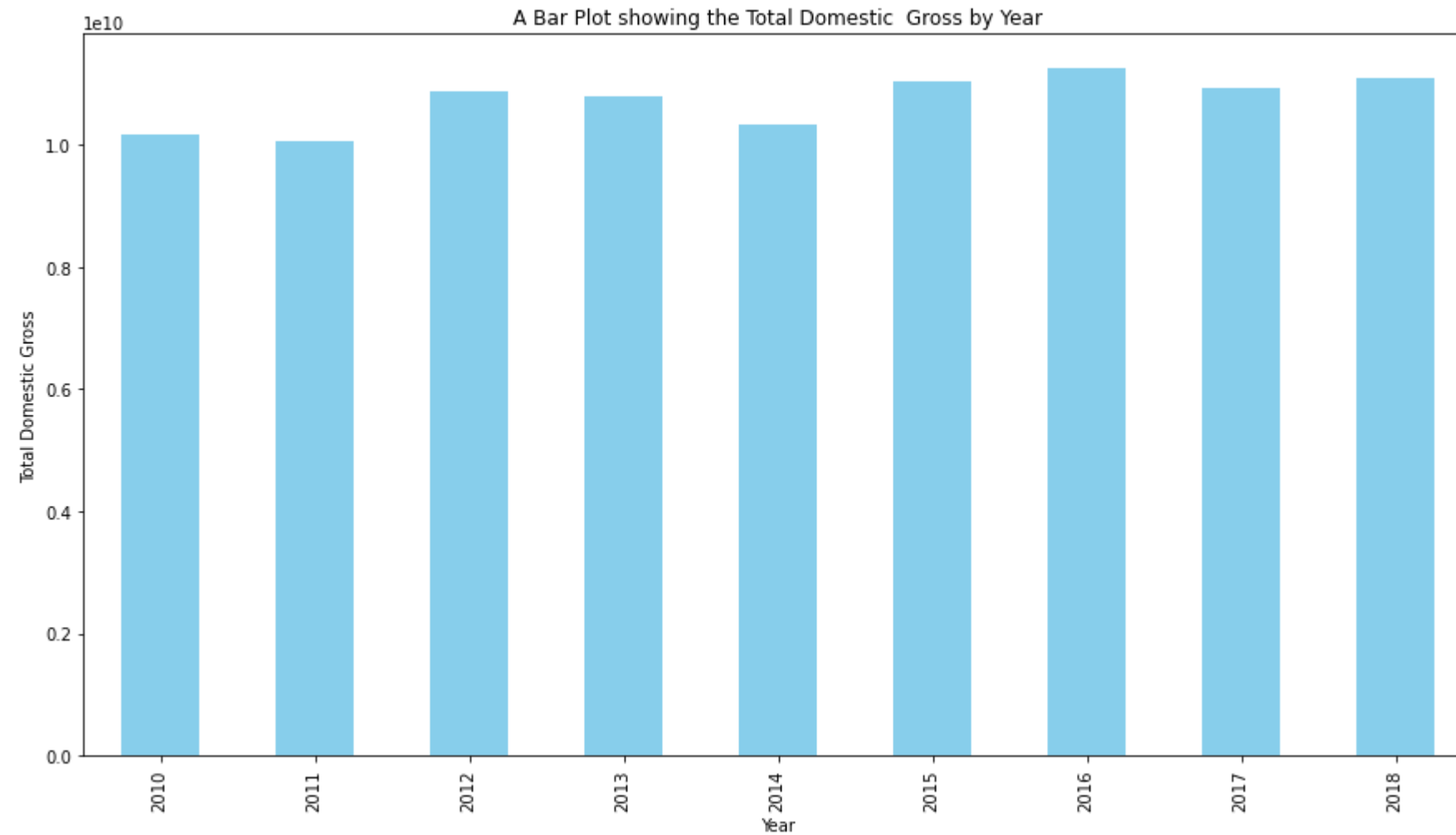
In the movie budget file, i.e. Data\tn.movie_budgets.csv**,**
budgets['International_gross'] = budgets['worldwide_gross'] + ['budgets['domestic_gross']
budgets['International_gross'].head()

In the first code, I first found the gross earnings from the rest of the world i.e. not the American market. Then found the first five gross earnings.
From the correlation analysis, i found that Production budget and International gross have a correlation of 0.739912 indicating a strong positive correlation. Movies with higher production budgets tend to have higher International gross incomes and vice versa.

Data Visualization
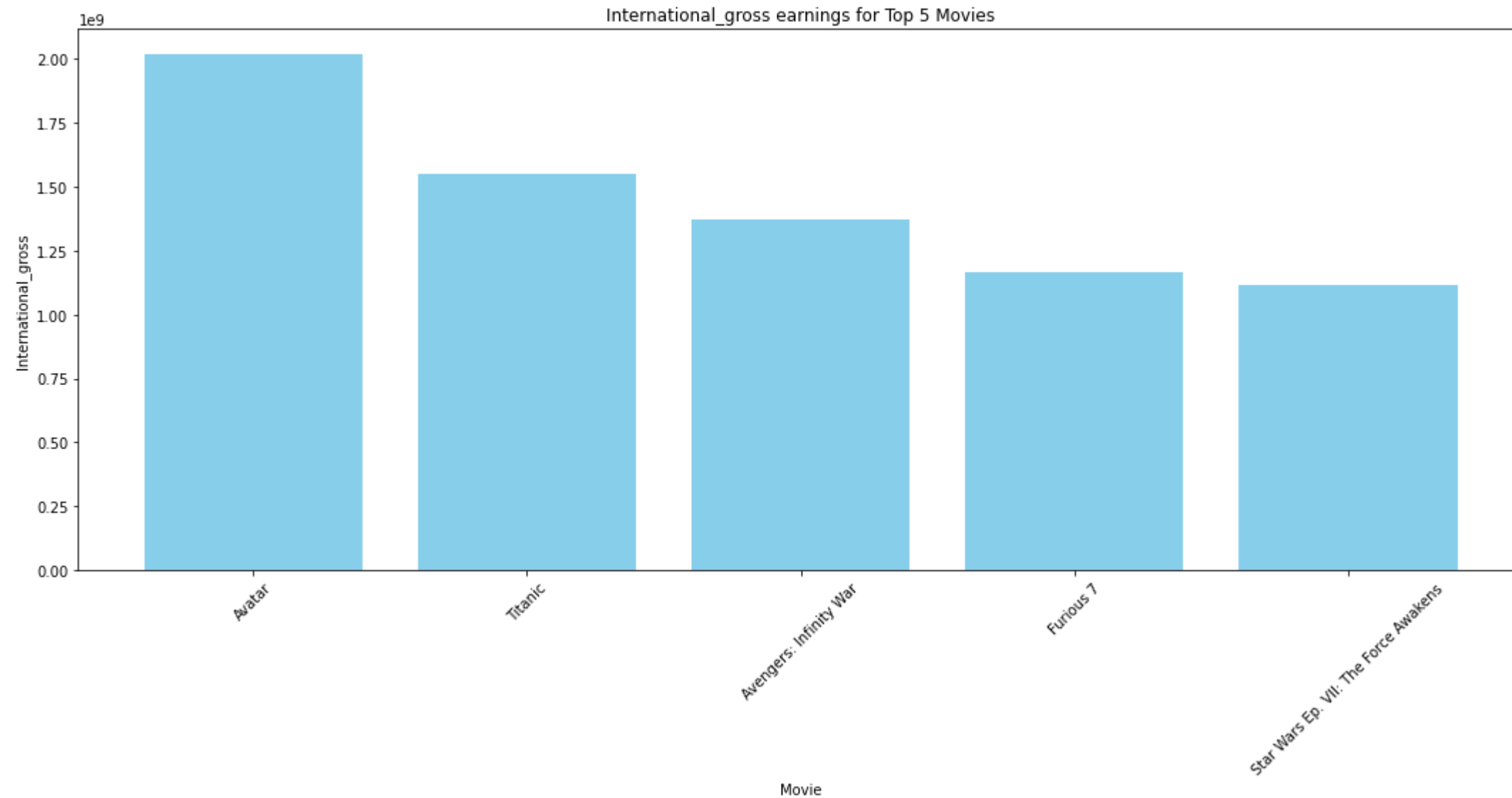
Data Visualization - Data\bom.movie_gross.csv
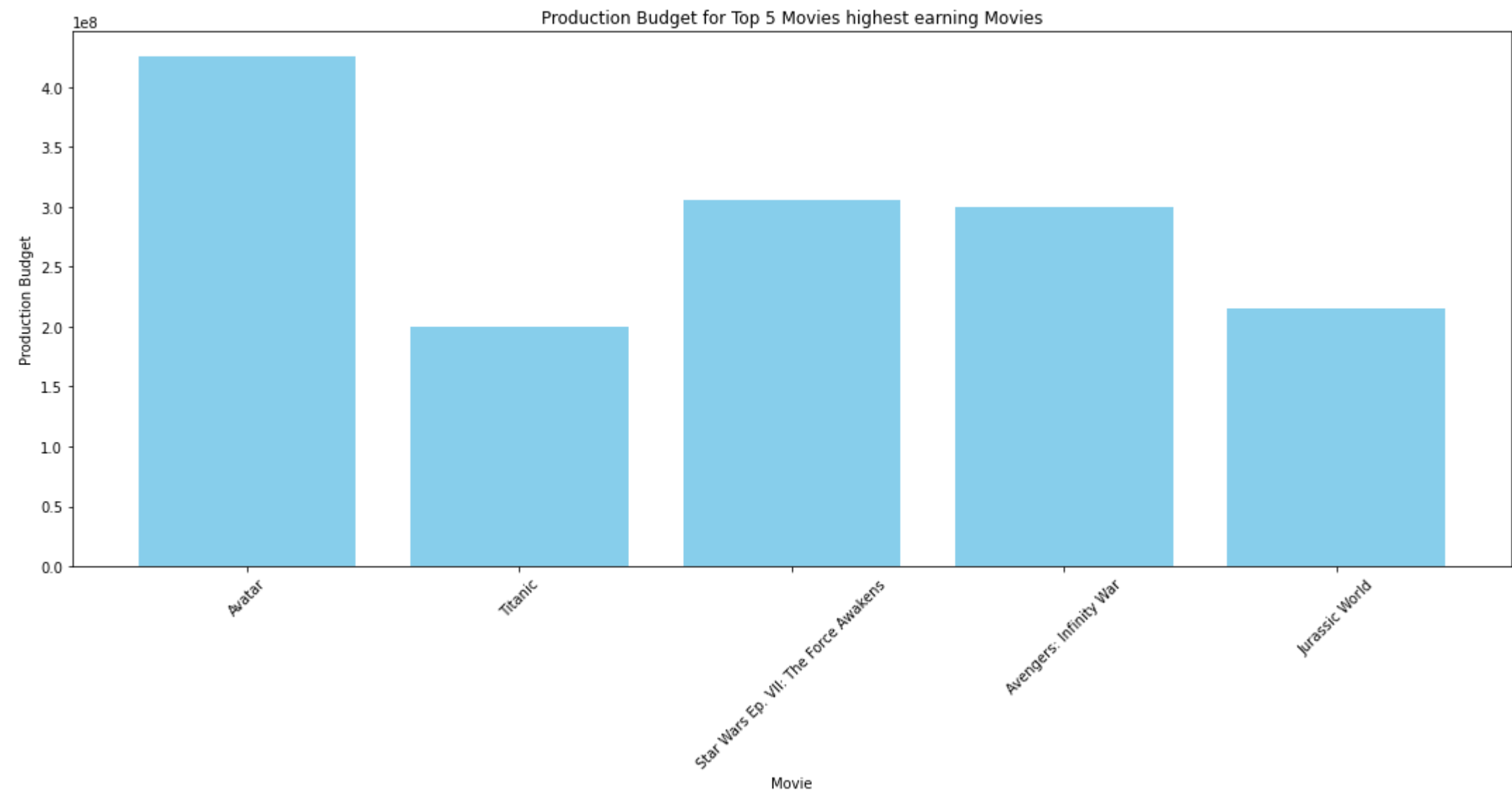
Data Visualization

From the bar plot in the previous, we can see that the year in which the highest domestic gross income was generated was in 2016 where gross income from the movies was 11,253,653,097 dollars.

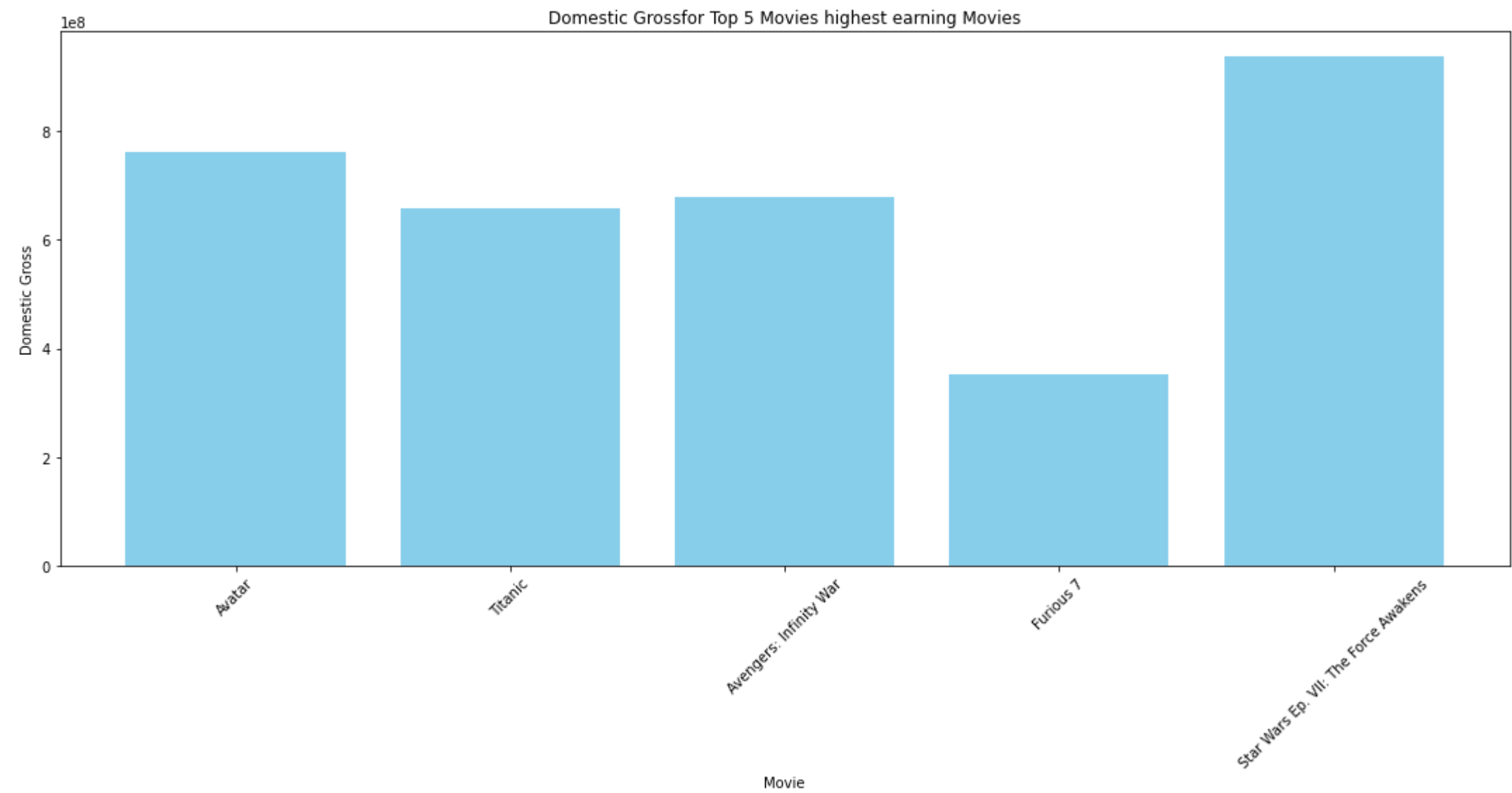# Data Visualization - Data\tn.movie_budgets.csv
We will plot the production budget of the movies against the total gross income

This bar plot shows the production budget spent on the top_5_movies on the Box office.

Production Budget for Top 5 Movies highest earning Movies

This bar plot shows the domestic earnings from the top_5_movies on the Box office.

Domestic Grossfor Top 5 Movies highest earning Movies

Data Visualization

From the Bar graphs above, we can see that production budget of a movie plays a huge role in the amount of earnings a Movie will make.
For instance, the movie Avatar had a production budget of 425 million dollars and the gross worldwide earnings from the movie were 2.7 billion dollars. Though this might not be the only factor for these high earnings, it is quite essential that a proper budget is set for Movie production.

Recommendations for Microsoft

1 **Based on Genre**

From the top_5_movies based on World wide earnings, Microsoft should create Science Fiction Movies as they are the highest earners.

2 **Based on Production budget**

We can see that production budget of a movie is quite essential in determining the amount of earnings a Movie will make.

it is quite essential that Microsoft sets aside a proper production budget should they venture into production of Movies.

3 **Based on Target Market**

A lot of earnings for most of the movies are from International markets. Therefore, in as much as catering to the Domestic audience is essential, Microsoft should create Movies with an International appeal so as to attract foreign audience.

Thank You

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