**Summary of Dataset IMDB Movie Analysis:**

1. Dataset Overview :

* The dataset contains information about movies, including genres, ratings, budget, revenue, and release years.
* Rows represent individual movies and columns describe their attributes.

**Insights :**

* Missing values were present in budget, revenue, and ratings columns.
* Data types required conversion such as dates.

2. Data Cleaning :

* Dates were converted to a proper format.

3. Univariate Analysis :

* **Scores:** Ratings followed a slightly skewed distribution with most movies receiving moderate scores.
* **Genres:** Drama, Action, and Comedy were the most frequently occurring genres.

**Insights :**

* Most movies have ratings in the 6-8 range.

4. Bivariate Analysis :

**Budget vs. Revenue :**

* A positive correlation (moderate to strong) exists between budget and revenue. Larger budgets often yield higher revenues.

**Ratings vs. Country :**

* Average ratings vary by country, with some regions consistently producing higher-rated movies.

**Correlation Coefficient :**

* Budget and revenue had a stronger correlation compared to ratings and revenue, showing that budget size is more predictive of revenue than ratings.

**Insights :**

* Budget is a significant driver of revenue, but high revenue doesn’t necessarily mean high ratings.

5. Genre-Specific Analysis :

**Highest Average Rating :**

* Documentaries and Dramas had the highest average ratings, reflecting critical appreciation.

**Insights :**

* Audience preferences have shifted towards more visually engaging genres, such as Action and Adventure.

6. Year and Trend Analysis :

**Ratings Over Time :**

* Average ratings have remained stable, suggesting consistent quality over decades.

**Movie Releases :**

* The number of releases has increased significantly since the 2000s, showing the growth of the film industry.

**Insights :**

* Technological advancements and broader accessibility have led to a surge in movie production.

7. Multivariate Analysis :

**Genres by Decade :**

* Specific genres like Action and Sci-Fi became dominant in the 21st century, reflecting technological and storytelling advancements.

**High-Rated Movies :**

* Genres like Documentary and Drama had higher ratings, while Action movies often prioritize spectacle over ratings.

**Insights :**

* Audience tastes evolve with time, and certain genres thrive in specific decades due to cultural and industry trends.

**Final Insights from the Analysis:**

* **Budget is a Key Driver of Revenue:** Movies with higher budgets tend to generate higher revenues, showcasing the importance of investment in production.
* **Stable Ratings Over Time:** Despite the industry's growth, average ratings have remained stable, indicating consistent quality.
* **Genre Evolution:** Action and Adventure have become dominant, but critically acclaimed genres like Documentary and Drama still shine in ratings.
* **Increasing Movie Releases:** A dramatic increase in the number of movie releases, especially after 2000, highlights industry expansion.
* **Shift in Genre Popularity Over Decades:** Genres have shifted with societal preferences, technological advances, and storytelling trends.