Executive Summary – Global Movie Performance Analysis

Problem Statement

The movie industry involves high production and marketing costs, yet box-office success remains uncertain. This project aims to analyze global movie data to identify the key factors that influence a movie's commercial performance and audience reception, with a focus on budget, genre, and ratings.

Objective

To explore and understand how movie budgets, genres, and audience/critic ratings impact global box-office revenue and to uncover patterns that explain why some movies succeed while others do not.

Tools Used

- **Python** (Pandas,Numpy, Matplotlib, Seaborn) for data cleaning and exploratory data analysis

- **Jupyter Notebook** for analysis and documentation

- **Tableau Public** for interactive data visualization and dashboard creation

Methodology

The dataset was cleaned and prepared to ensure consistency and accuracy. Exploratory data analysis was performed to examine relationships between budget and revenue, genre-wise revenue trends, rating comparisons between IMDb and Rotten Tomatoes, and revenue trends over time. Key patterns, correlations, and outliers were identified using visual and statistical analysis. An interactive Tableau dashboard was developed to present insights in a clear and user-friendly manner.

Key Insights

- Movie budget shows a strong positive relationship with global box-office revenue; however, higher budgets do not guarantee success.

- Action, Adventure, and Sci-Fi genres consistently achieve higher average revenue compared to other genres.

- IMDb and Rotten Tomatoes ratings are positively correlated, indicating alignment between audience and critic opinions.

- High ratings alone are not reliable predictors of box-office success.

Conclusion

This project demonstrates how data analytics and business intelligence techniques can be applied to real-world movie data to generate meaningful insights. The findings highlight that while investment and genre play a significant role in commercial success, ratings alone are insufficient predictors. The combination of Python-based analysis and Tableau visualization supports effective data-driven decision-making in the media and entertainment industry.