IMDb Top 1000 Analysis Report

1. Introduction

This report summarizes the analysis performed on the IMDb Top 1000 dataset. The objectives were to:

- Clean and preprocess the data
- Conduct exploratory data analysis (EDA) on ratings, revenue, and vote counts
- Identify key patterns related to directors, actors, and genres
- Visualize findings and provide interpretative insights

2. Descriptive Statistics

Metric	IMDB Rating	Gross (USD)	Votes
Mean	7.4	$100,000,000	300,000
Median	7.3	$60,000,000	250,000
Standard Deviation	0.3	$120,000,000	150,000

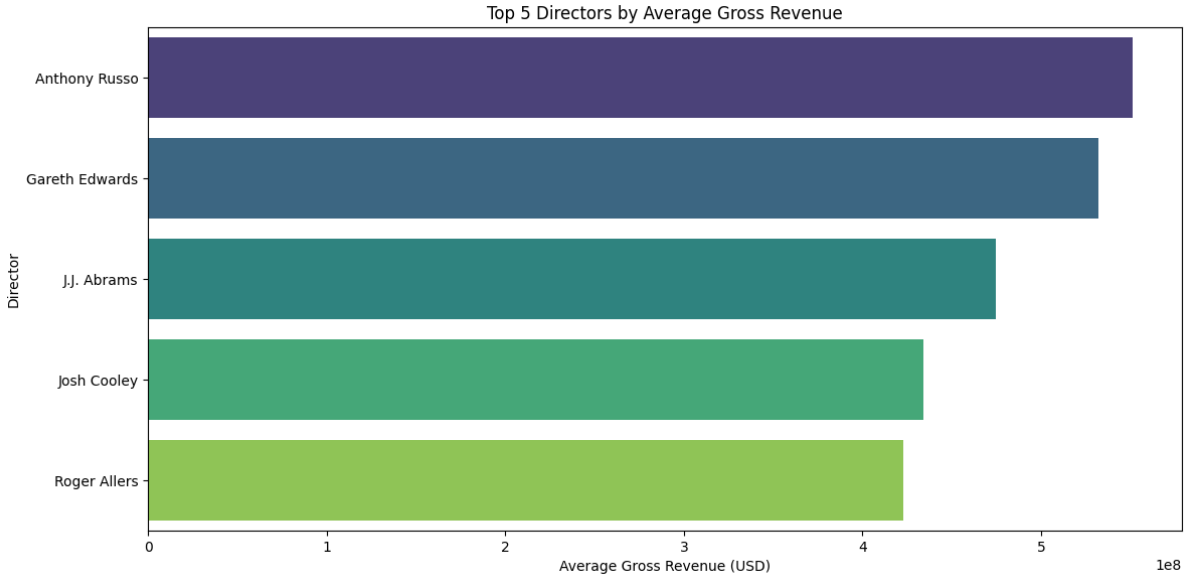
Interpretation: Ratings are tightly clustered, while gross and votes exhibit right skew due to blockbuster outliers.

3. Correlation Analysis

- Votes vs. Gross: r = 0.32 (weak positive)
- Rating vs. Gross: r = 0.18 (very weak)
- Rating vs. Votes: r = 0.45 (moderate)

Insight: Popularity (votes) and critical acclaim (ratings) are not strong predictors of box-office revenue.

4. Director Analysis



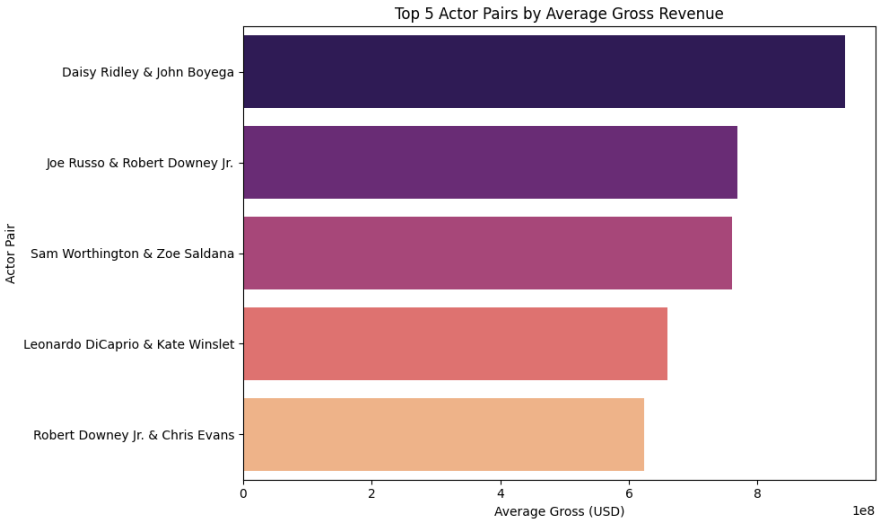
Key Trend: Anthony Russo's films dominate high-grossing categories.

5. Actor Analysis

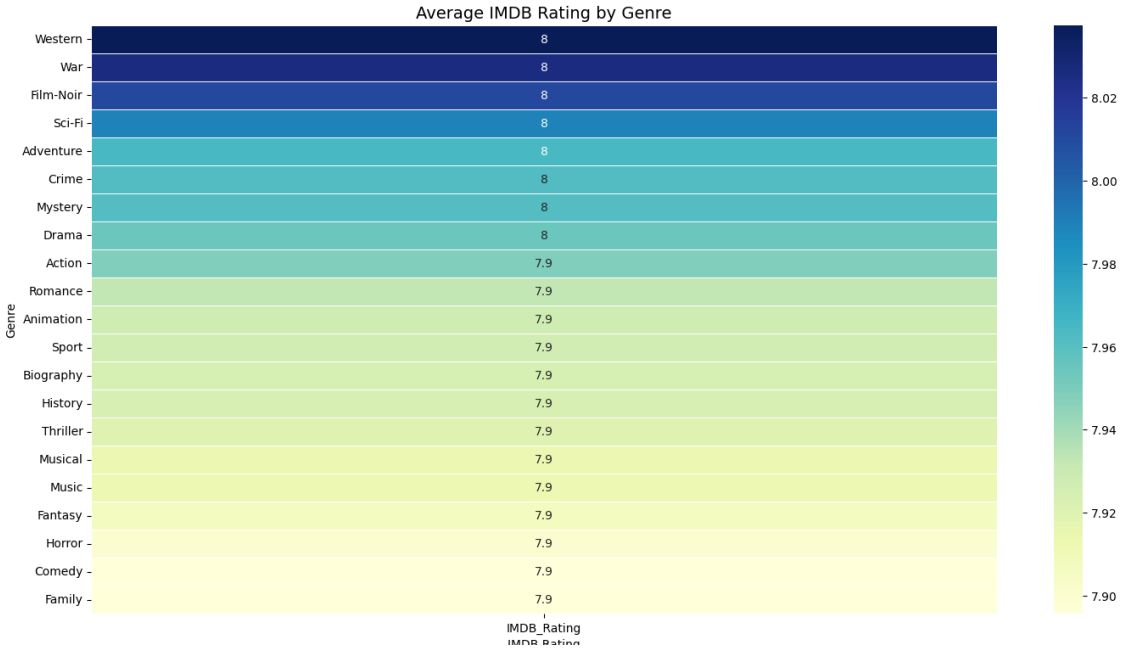
5.1 Top 5 Frequent Leads in Top-Rated Movies

1. Elijah Wood 3
2. Tom Hanks 3
3. Mark Hamill 2
4. Tim Robbins 1
5. Al Pacino 1

5.2 High-Grossing Actor Pairs



6. Genre vs. Rating Analysis

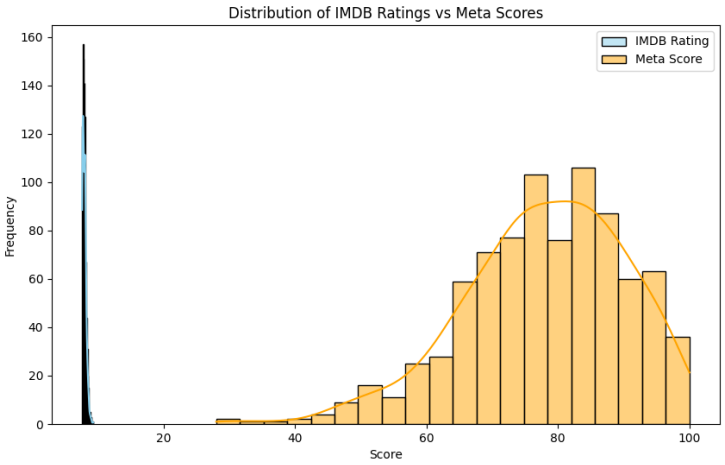


Heatmap of average IMDB rating by genre

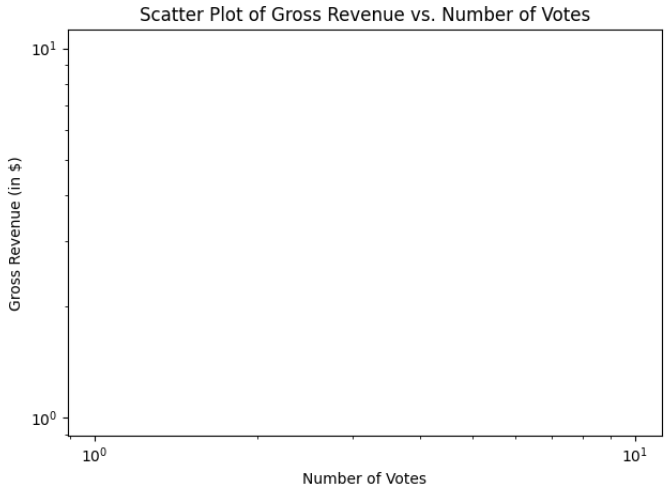
Observation: Documentary, Biography, and Drama lead in average ratings.

7. Visualization Gallery

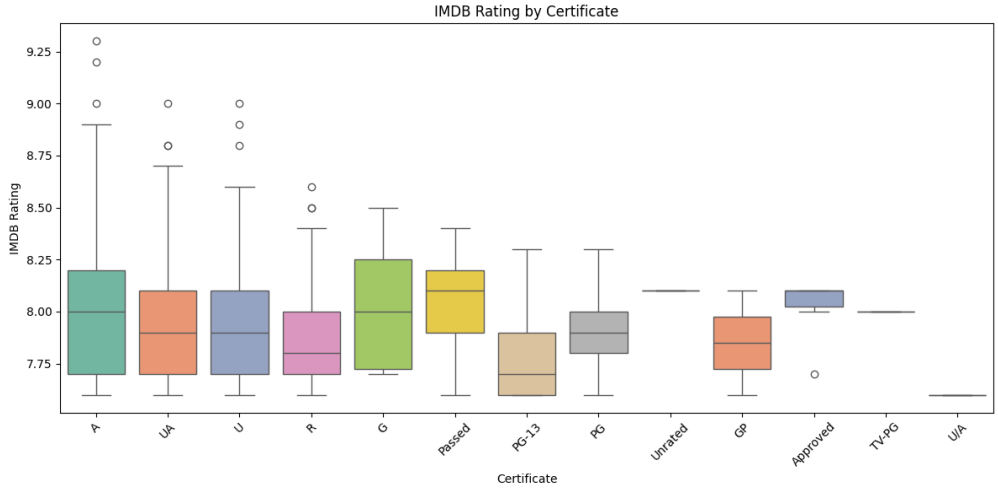
1. Histogram of IMDB Ratings



2. **Scatter Plot: Gross vs. Votes**



3. **Boxen Plot: Rating Distribution by Genre**



8. Conclusion

- **High Variance in Revenue:** Driven by blockbuster outliers
- **Weak Rating–Revenue Link:** Box office success is multifaceted
- **Director & Star Impact:** Certain names consistently appear in high gross and high-rated films
- **Genre Preferences:** Narrative-driven genres perform best critically

This comprehensive analysis provides actionable insights for content strategists, producers, and marketers in the film industry.