Data-Driven Insights for a Profitable Movie Studio

A Strategic Analysis of Box Office Success Factors

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Non-Technical Presentation

Overview

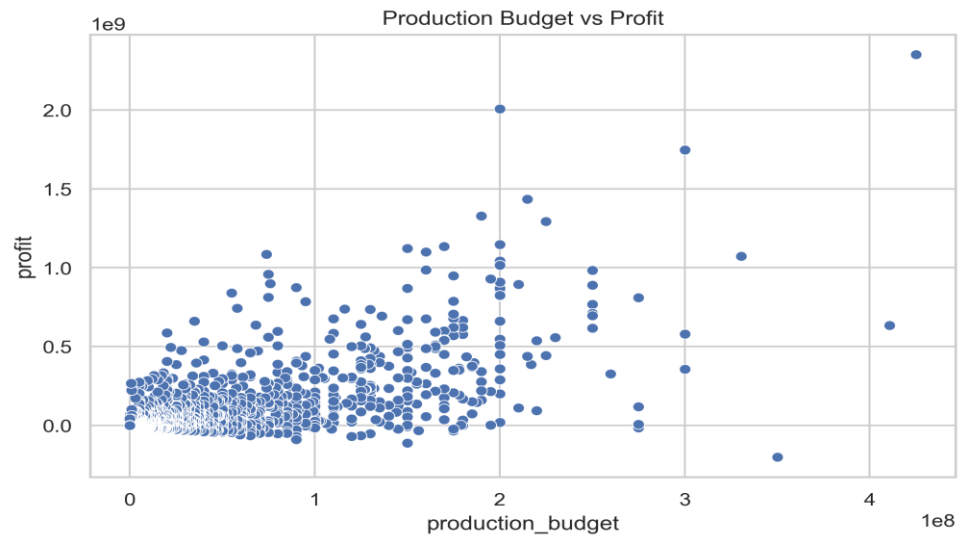
- **Context:** The film market is risky and expensive, but success can be monumental.
- **Objective:** Identify the key factors that determine box office success, to help a new production company invest strategically.
- **Methodology:** Analysis of over 3,000 films using data from IMDB, Box Office Mojo, and statistical techniques.

Data Understanding

- **Data from 3 merged sources:**
- 💼 *The Numbers* : budgets, revenues, profits
  🎬 *IMDB Basics* : titles, genres, duration, year
  🌟 *IMDB Ratings* : average ratings and number of votes
- **Final dataset size:** 3,006 films (after cleaning and merging)
- **Key variables:**
- **Quantitative:** budget, profit, duration, rating, votes
- **Categorical:** genre, release year

Data Analysis & Insights

- Insight #1 — Budget is strongly correlated with profit

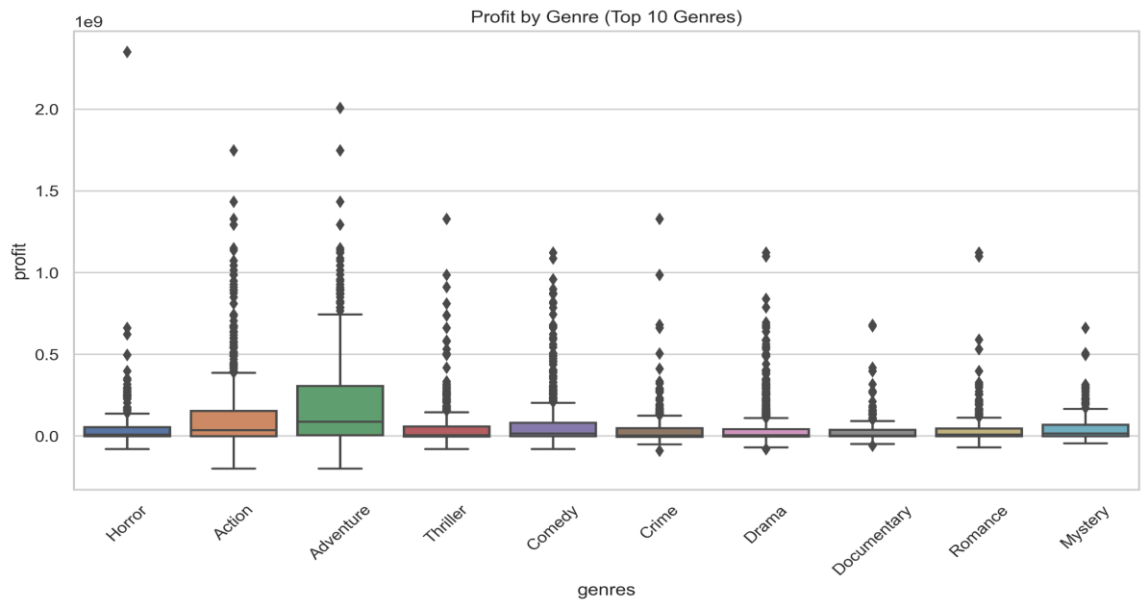


🔬 *Correlation:* r = 0.65 (strong positive)

💡 **Recommendation 1:** Invest in higher-budget films, especially those with strong IPs or powerful marketing.

Data Analysis & Insights

- **Insight #2 — Some genres are significantly more profitable**



Recommendation 2: Focus on high-yield genres to maximize ROI.

Data Analysis & Insights

- Insight #3 — Higher-rated films have a slight advantage

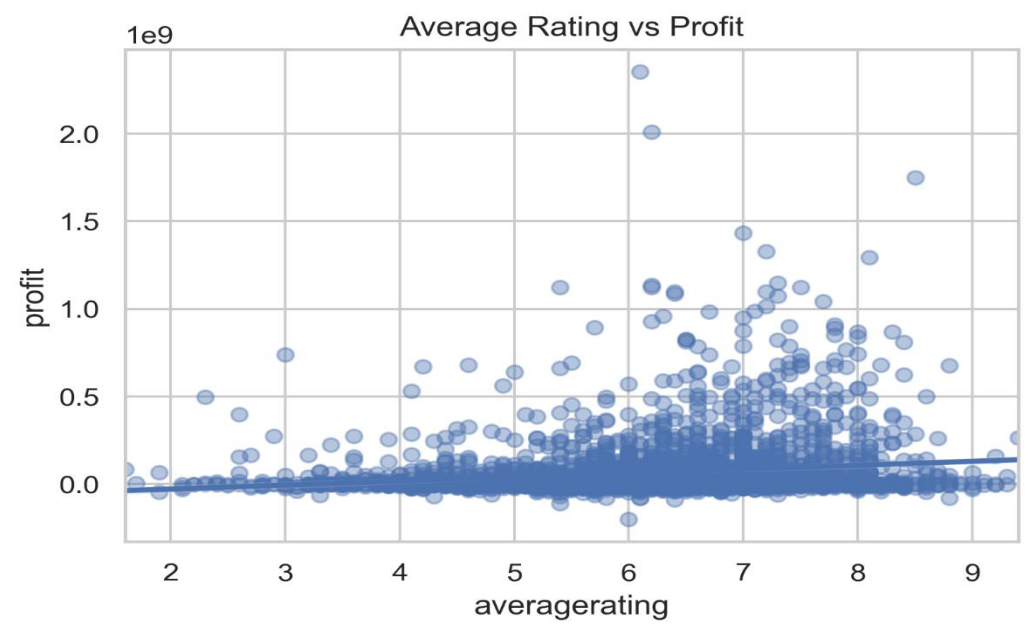


Chart: Rating vs. Profit (weak but significant correlation)

Recommendation 3: Enhance artistic quality (screenplay, casting, editing) to aim for higher IMDb ratings.

Recommendations

Summary of the 3 key recommendations:

- Allocate a substantial budget to high-potential projects.
- Prioritize the most profitable genres.
- Optimize runtime (~100–120 min) and aim for high perceived quality.

Next Steps

- Build a multiple regression model (including more variables like genre, duration, votes, etc.)
- Develop a predictive tool (Power BI or Streamlit) to estimate a film's projected profit
- Analyze the impact of seasonality (release month)
- Integrate marketing data (if available) and use NLP on film summaries

Thank You / Questions

Thank you for your attention!
I would be happy to answer any questions or discuss further insights.

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https://github.com/richefleuriord/Ds_movie-analytics.git