Using Data to Guide Microsoft's Original Video Content Venture

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Guiding Microsoft's Original Video Content Venture

Descriptive analysis to help Microsoft scope a project to enter the market

- Focus on designing films in the most popular genres while minimizing financial risk.

- Identify the directors most familiar with those genres.

- Identify thematically diverse directors who can help Microsoft realize its vision.

Outline

- Business problem
- Data
- Methods
- Results
- Conclusions

Business Problem

- Identify success

- Constrain the set of options available for the video content

- Identify the director best equipped to manage the content selected
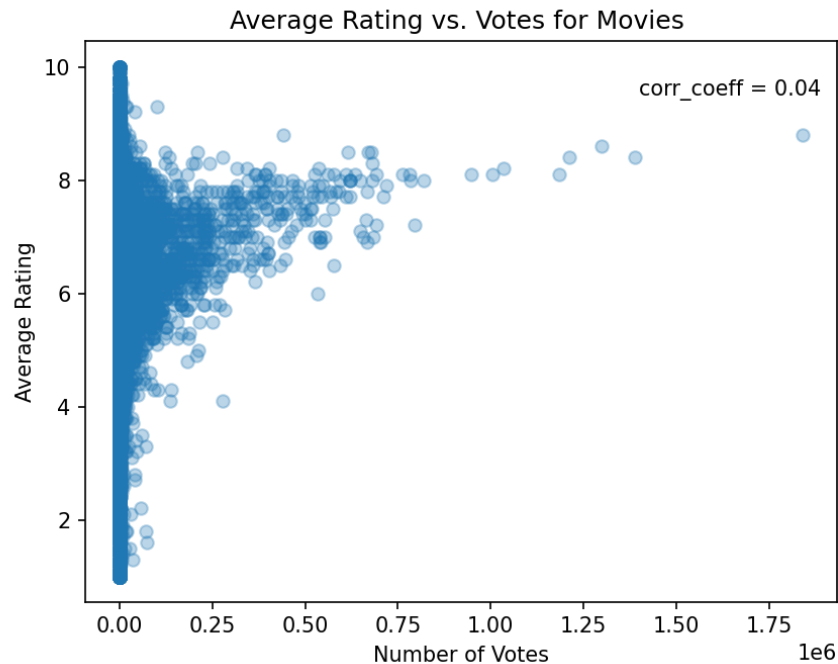
Data

- IMDb -- Movie characteristics data:
  - Database tables
  - Film genre, ratings, people, principal roles

- The Numbers -- Movie production data:
  - Comma delimited file
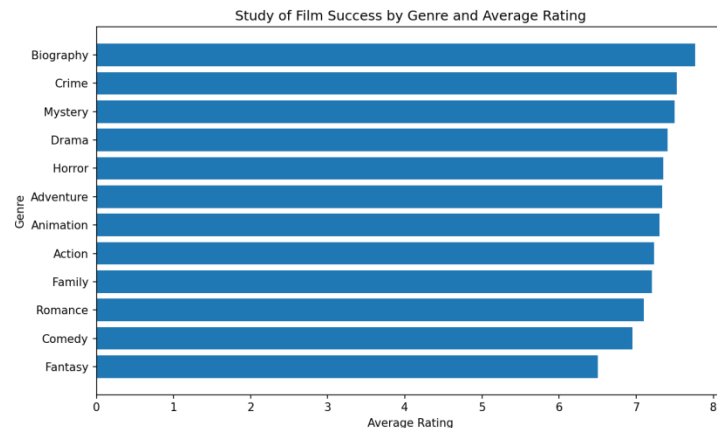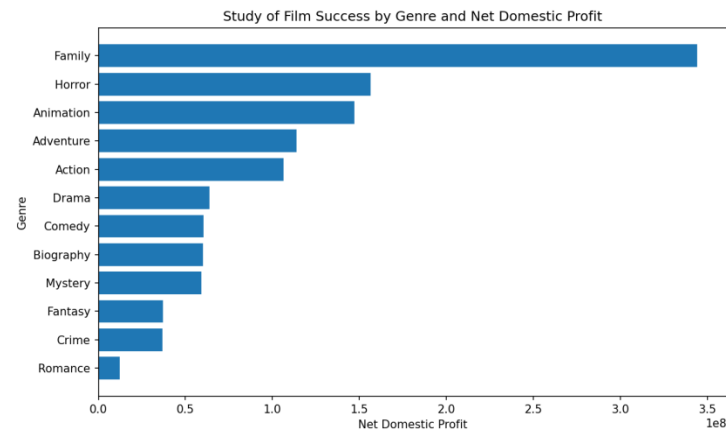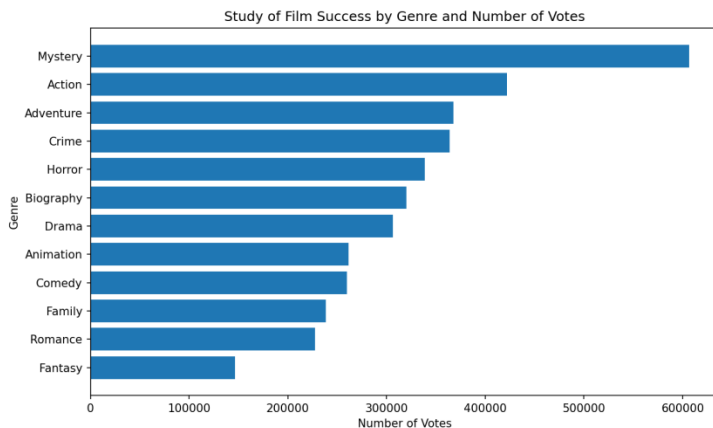 - Budget, gross domestic and foreign earnings

Methods

- Data preparation and cleaning

- Examination of variable independence

- Descriptive data analysis

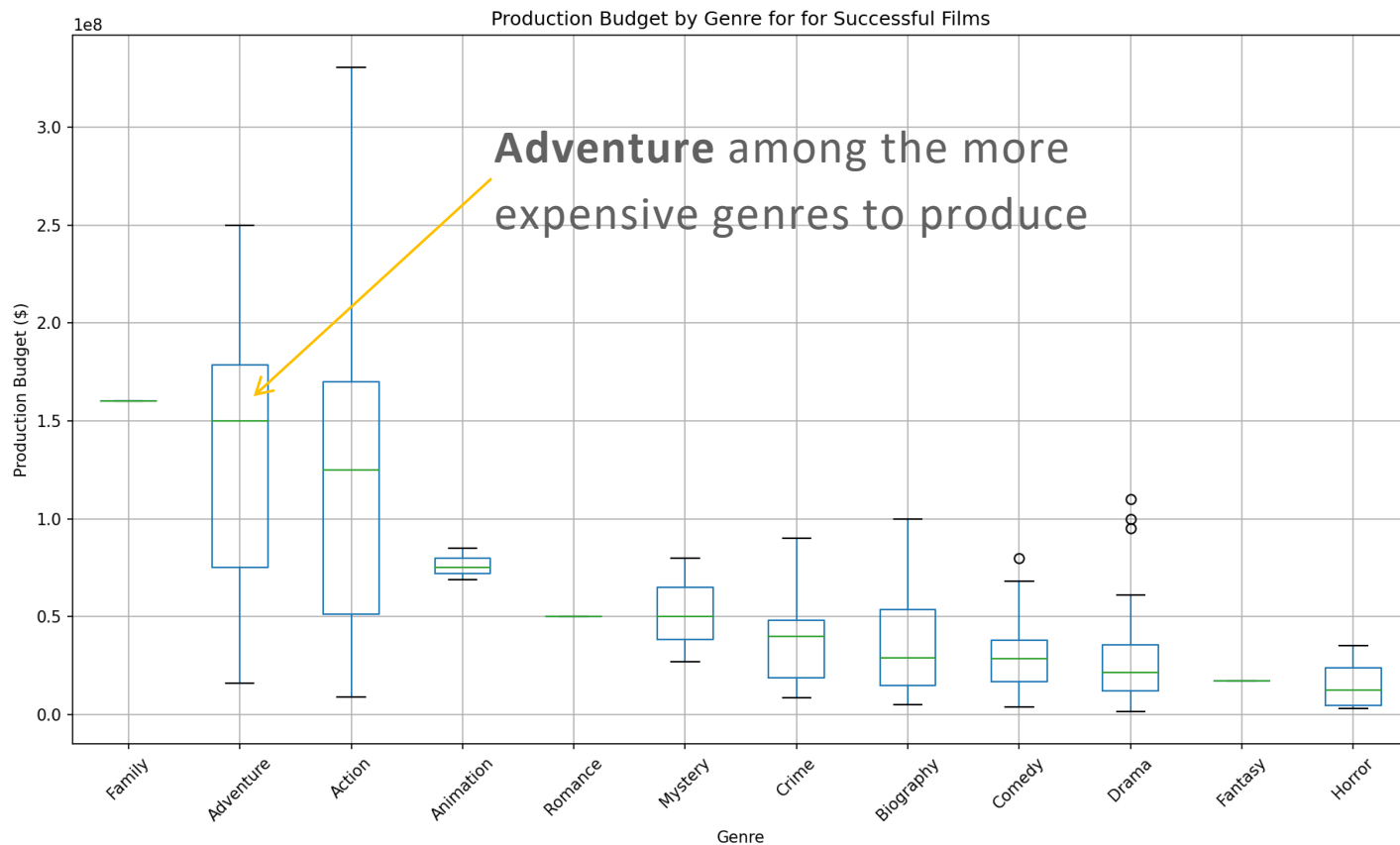Average Rating vs. Votes for Movies
corr_coeff = 0.04

Results: Genre Seletion

Mystery but also **Crime**, and **Adventure** genres optimize two of the three success ratings.

Study of Film Success by Genre and Net Domestic Profit

Study of Film Success by Genre and Number of Votes

Study of Film Success by Genre and Average Rating

Results: Genre Selection

Production Budget by Genre for for Successful Films

Adventure among the more expensive genres to produce
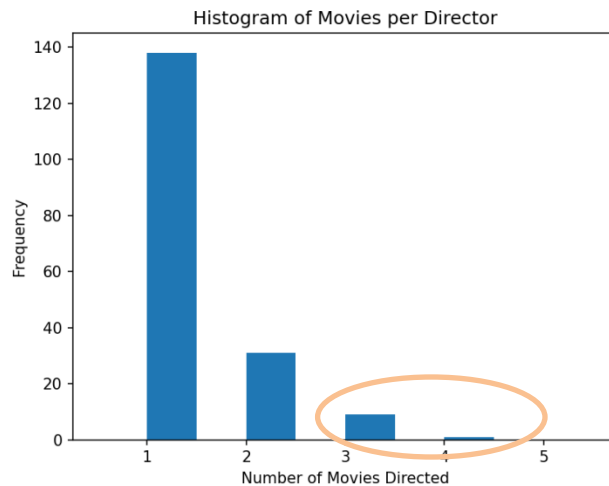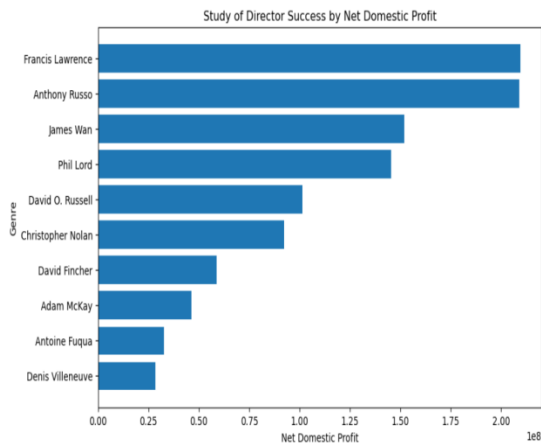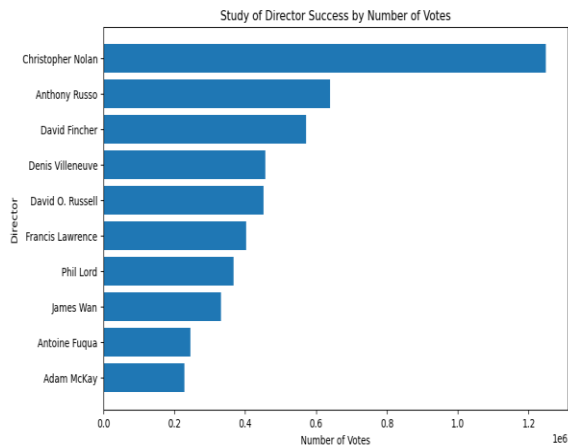
Results: Director Selection

Among the top directors associated with the Mystery, Crime, and Adventure genres are **Anthony Russo** along with **David Fincher** and **Christopher Nolan.**

Histogram of Movies per Director

Study of Director Success by Number of Votes

Study of Director Success by Net Domestic Profit

Study of Director Success by Average Rating
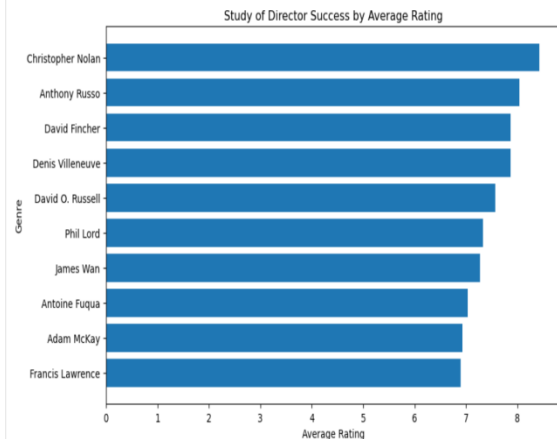
Results: Director Diversity

David Fincher and **Christopher Nolan** are the more diversified among the most successful.

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Anthony Russo
                        movie        numvotes  avg_rating  net_profit            genres
58  Captain America: The Winter Soldier  666252     7.8      89746958  Action,Adventure,Sci-Fi
62          Captain America: Civil War   583507     7.8     158084349  Action,Adventure,Sci-Fi
2               Avengers: Infinity War   670926     8.5     378815482  Action,Adventure,Sci-Fi

David Fincher
                        movie        numvotes  avg_rating  net_profit            genres
70              The Social Network   568578     7.7      56962694         Biography,Drama
54  The Girl with the Dragon Tattoo   387580     7.8      12515793     Crime,Drama,Mystery
24                      Gone Girl   761592     8.1     106767189   Drama,Mystery,Thriller

Christopher Nolan
                movie        numvotes  avg_rating  net_profit            genres
1          Interstellar  1299334     8.6      23017894    Adventure,Drama,Sci-Fi
4   The Dark Knight Rises  1387769     8.4     173139099         Action,Thriller
0             Inception  1841066     8.8     132576195  Action,Adventure,Sci-Fi
47              Dunkirk    466580     7.9      40068280     Action,Drama,History
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Conclusions

If Microsoft chooses to focus on the genre of film as the scoping condition:

- Focus on **genres associated with the most successful movies.**
- **Moderate financial risk** by avoiding high production costs.

If Microsoft prefers to hire the director to help define the scope of the original content project

- Hire the **director who can work across the greatest diversity of genres.**

Thank You!

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