# Microsoft Movies

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Statistics aimed at the creation of your FIRST potential movie

Chris Lewis

What Type of films are doing the best at the box office?

Many ways to look at this question in terms of:

- **Genres** (both individual and grouped)
    - Average Net Profit
    - Return On Investment
- **Budget V. Profit** - Are they correlated?
- **Best directors** based on average net profit
- **Highest Ratings** - Do ratings even matter?

Average Net Profit of Indiv. Genres Within Past 10 Years

Average Net Profit for Individual Genres
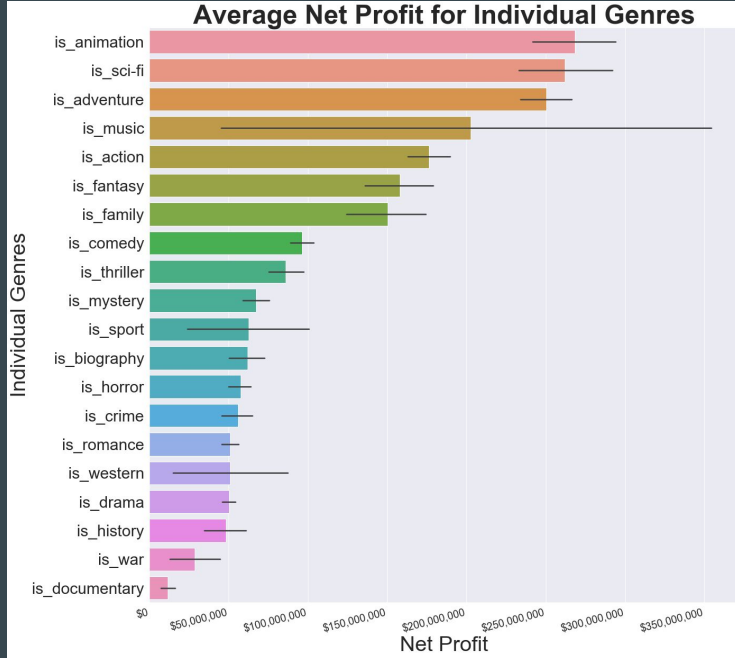
- Animation, Sci-Fi, and Adventure
- Action, Fantasy, Family
- Music has high a variance

Average Net Profit for Individual Genres
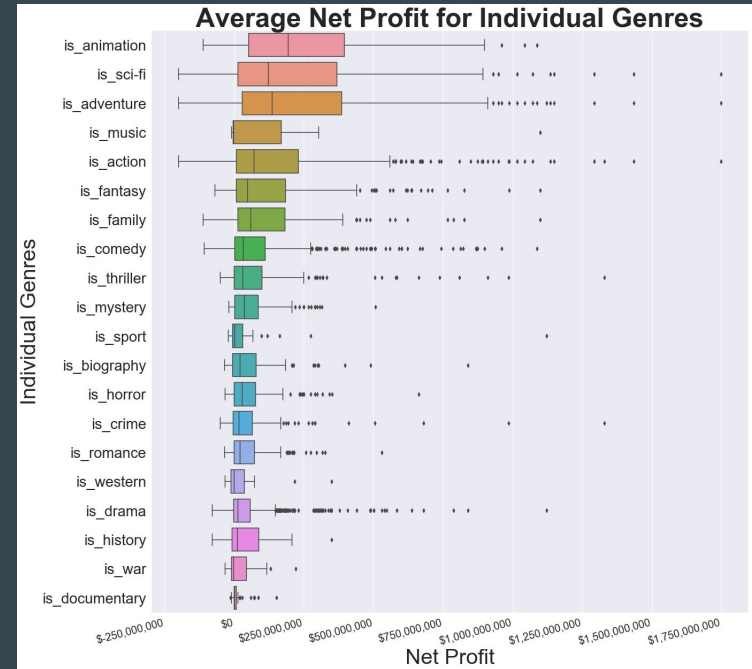
Recommendation: Choose one of the top 6 genres (excluding musicals) to set the type of your first movie!

Grouped Genres


Average Net Profit of Grouped Genres
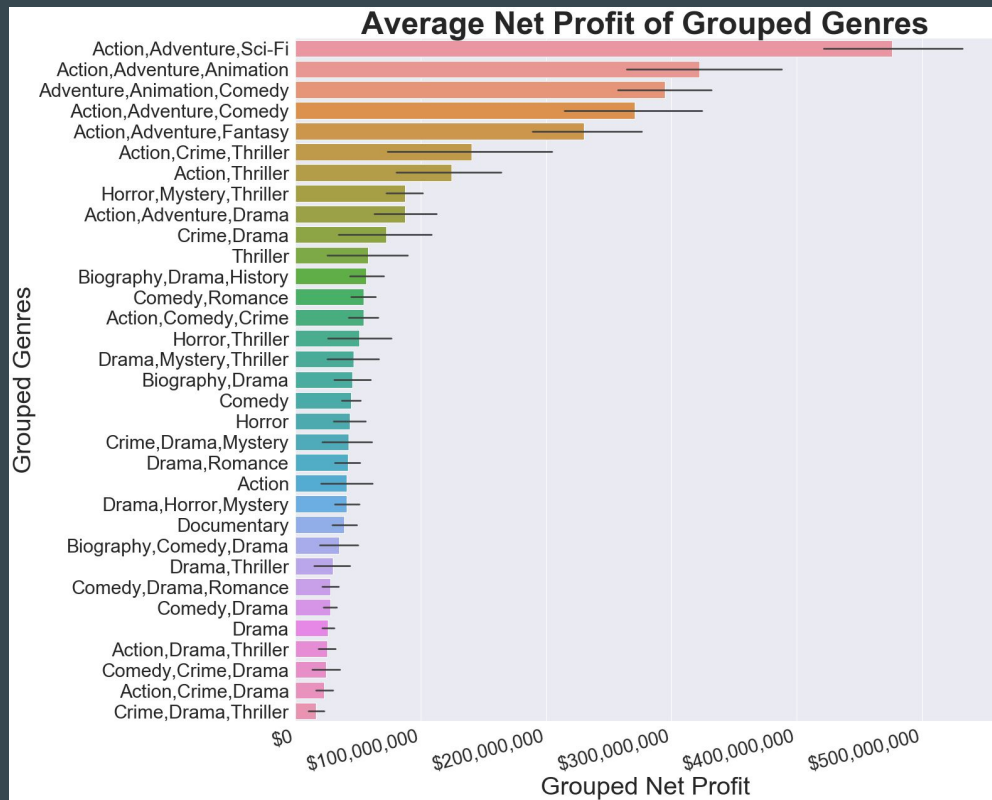
Recommendation (continued): Or if you want to choose multiple genres, choose one of the top grouped genres from this graph!

Average Production Budget For Indiv. Genres (10 Years)

Average Production Budget for Individual Genres

- The same genres that are making the most are also spending the most.

Average Production Budget for Individual Genres
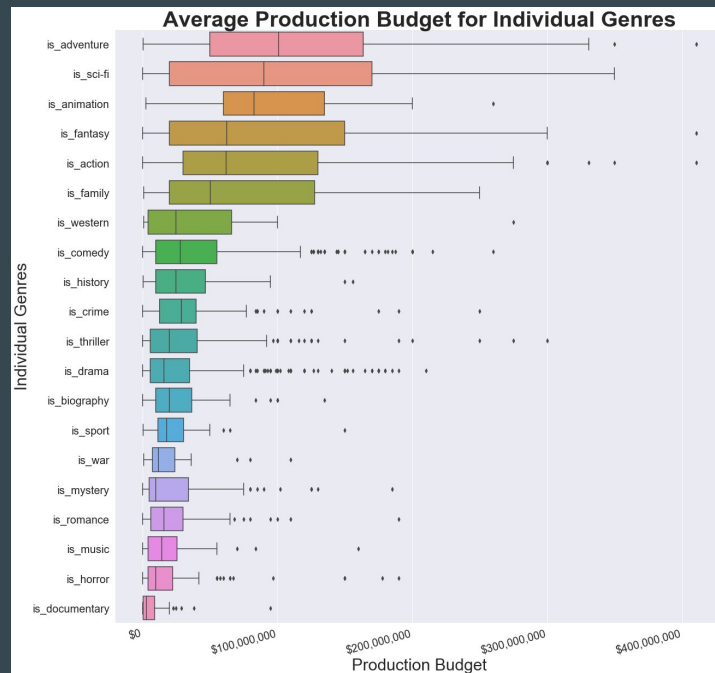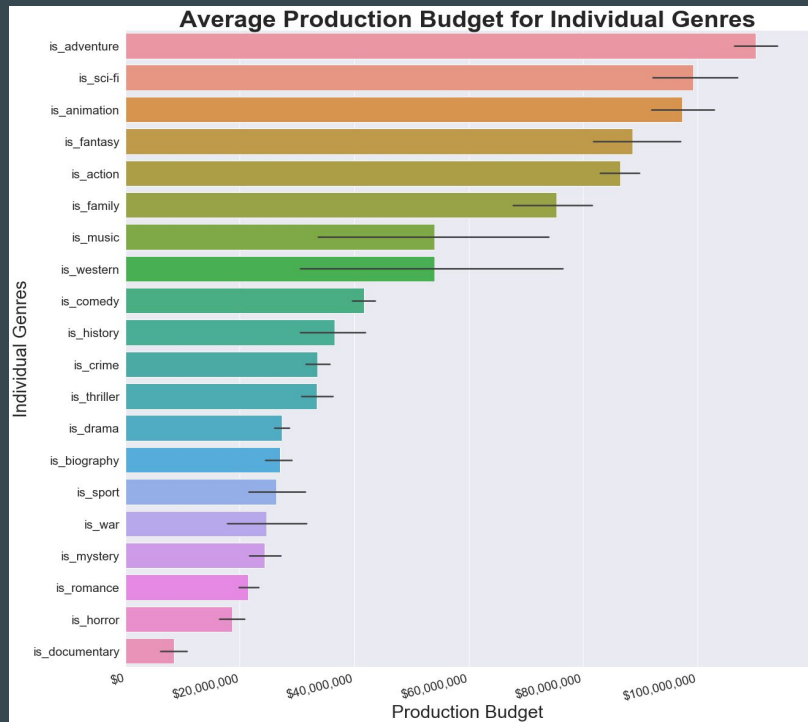
Spend Money to Make Money

Association between Production Budget and Total Net Profit

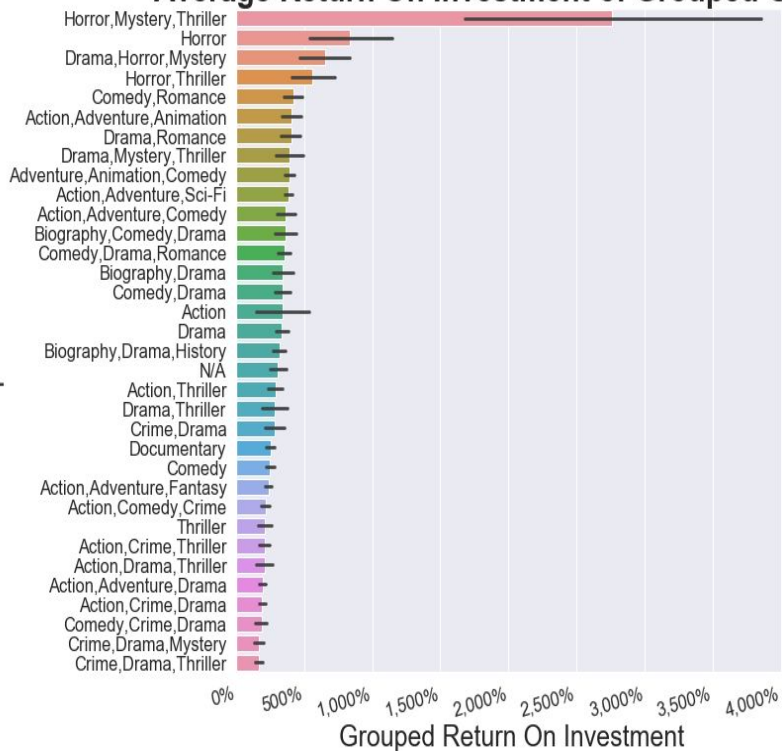Association Between Production Budget and Worldwide Gross of Movies

There is a strong positive correlation between Worldwide Gross and Production Budget
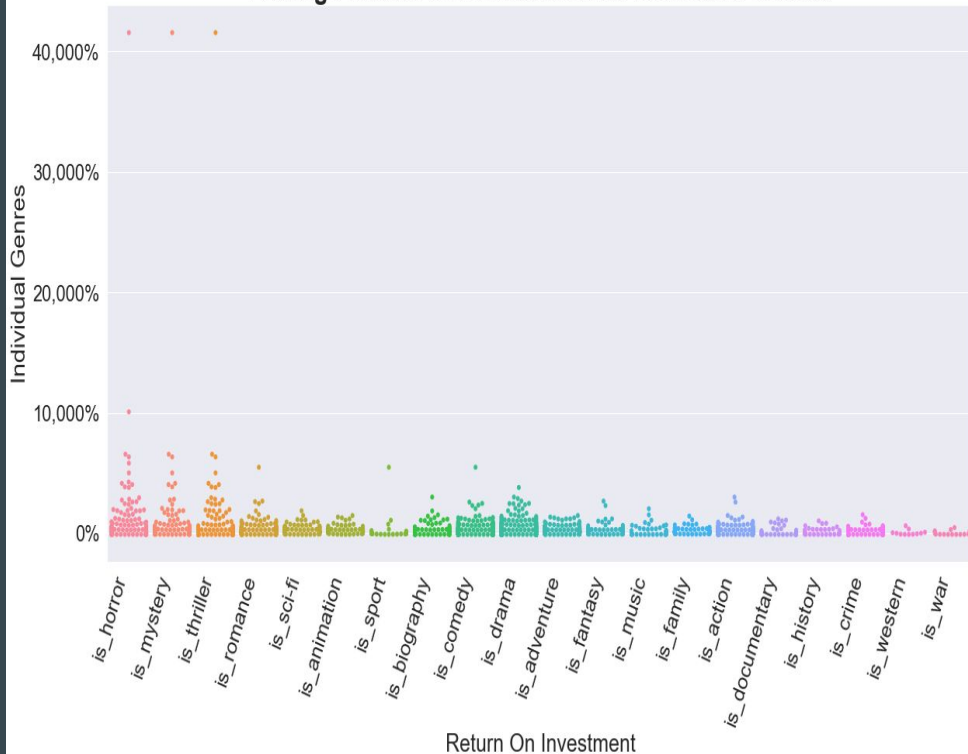
Recommendation:
Invest a LOT of money in production budget for highest potential gain

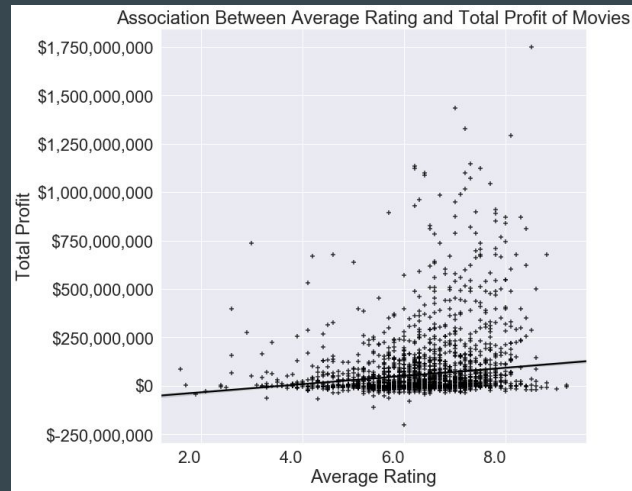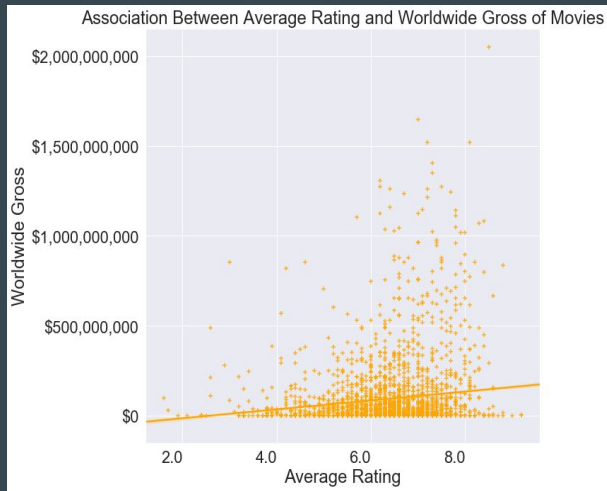# Movie Genres Average Return On Investment (10 years)

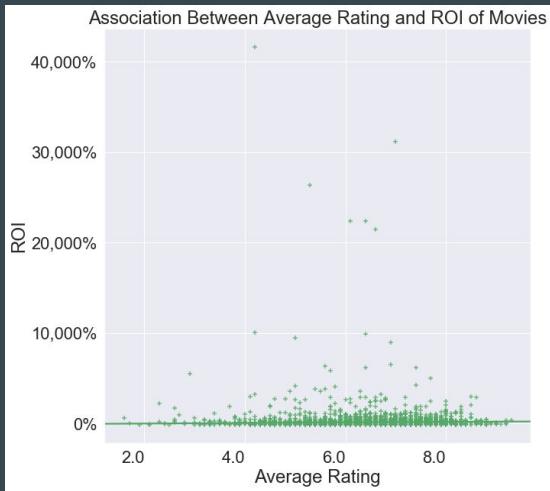## Average Return On Investment of Grouped Genres

Grouped Genres (top to bottom):
Horror,Mystery,Thriller; Horror; Drama,Horror,Mystery; Horror,Thriller; Comedy,Romance; Action,Adventure,Animation; Drama,Romance; Drama,Mystery,Thriller; Adventure,Animation,Comedy; Action,Adventure,Sci-Fi; Action,Adventure,Comedy; Biography,Comedy,Drama; Comedy,Drama,Romance; Biography,Drama; Comedy,Drama; Action; Drama; Biography,Drama,History; N/A; Action,Thriller; Drama,Thriller; Crime,Drama; Documentary; Comedy; Action,Adventure,Fantasy; Action,Comedy,Crime; Thriller; Action,Crime,Thriller; Action,Drama,Thriller; Action,Adventure,Drama; Action,Crime,Drama; Comedy,Crime,Drama; Crime,Drama,Mystery; Crime,Drama,Thriller

X-axis: Grouped Return On Investment — 0%, 500%, 1,000%, 1,500%, 2,000%, 2,500%, 3,000%, 3,500%, 4,000%

Average Return On Investment for Individual Genres

Y-axis: Individual Genres — 0%, 10,000%, 20,000%, 30,000%, 40,000%

X-axis (Return On Investment) categories: is_horror, is_mystery, is_thriller, is_romance, is_sci-fi, is_animation, is_sport, is_biography, is_comedy, is_drama, is_adventure, is_fantasy, is_music, is_family, is_action, is_documentary, is_history, is_crime, is_western, is_war
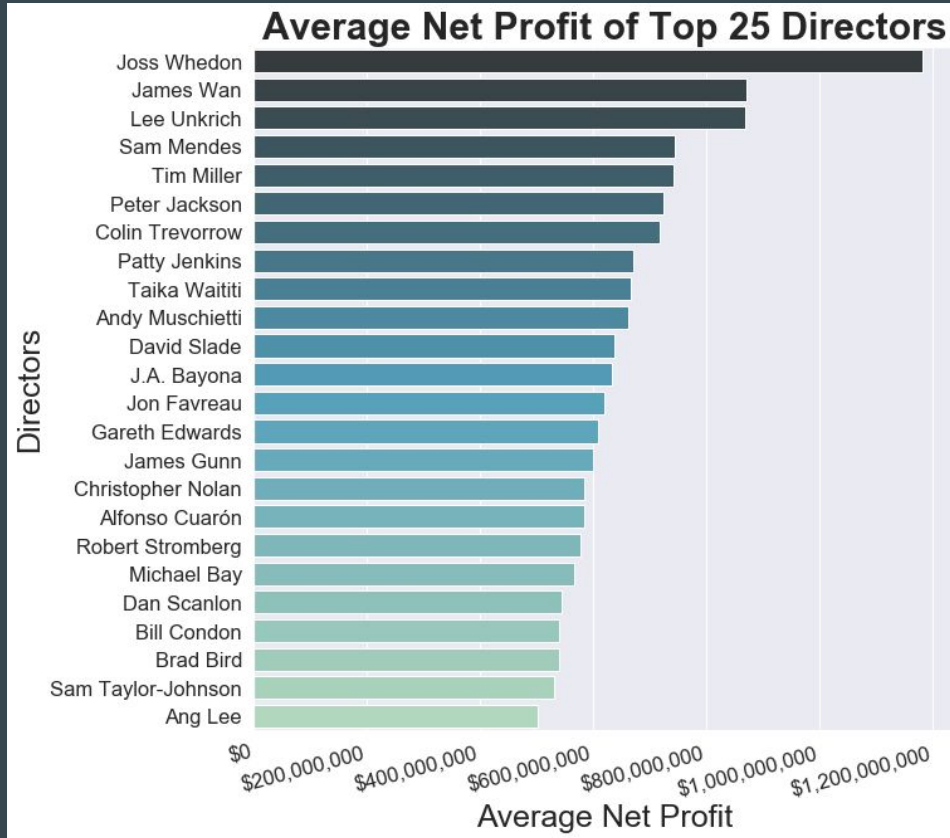
Do Ratings Really Matter?

(Left) - Average Ratings V. ROI = No correlation (-0.009)
(Center) - Average Ratings V Worldwide Gross = Little to no correlation (0.26)
(Right) - Average Ratings V Net Profit = Little to no correlation (0.21)

Top 25 Directors With the Highest Average Net Profits Within the Past 20 Years

Average Net Profit of Top 25 Directors

Recommendation: Hire a director from this list based on the type of movie you decide to make!

Conclusion & Recommendations:

- Pick from one of the <u>top genres/grouped genres</u> based off of <u>average net profit</u>.

- Choose a <u>director</u> from the <u>Top 25 list</u> based off of what type of movie you decide to make.

- **<u>Invest a lot of money into your production budget to see maximum gain!</u>**

Further Research:

Use an Web Scraping or an API (Application Programming Interface) to receive more data to find the following:

- Find best directors and writers according to highest average net profit within targeted genres in the past 10-20 years.
- Find the rating(s) (G, PG, etc) with the highest average net profit and ROI within targeted genres to determine what the optimal rating would be.
- Find the best time of year to release the movie based on when those types of movies do best (fake ex. On Average, PG-13 Action, Adventure, Fantasy movies reap their highest profit(s) at the box office in May)

Thank You for Your Time!

Appendix:
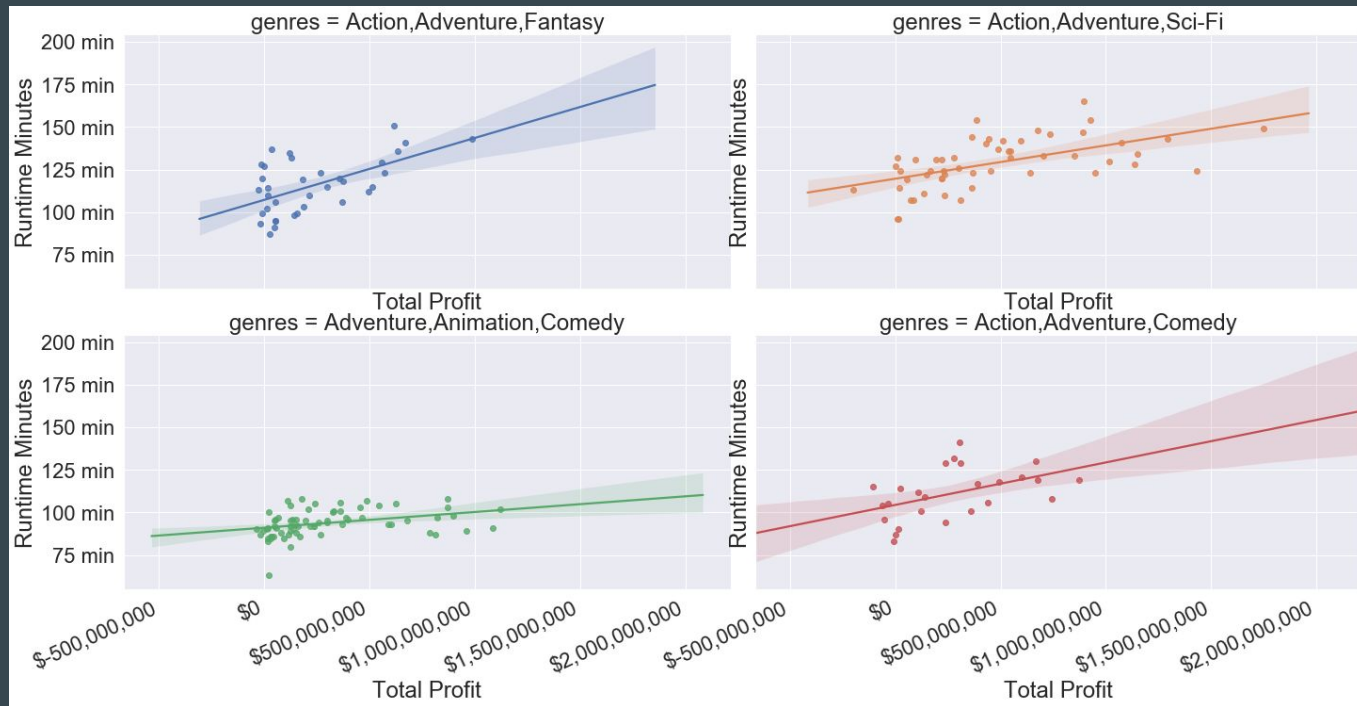
Correlation Between Runtime Minutes and Budget

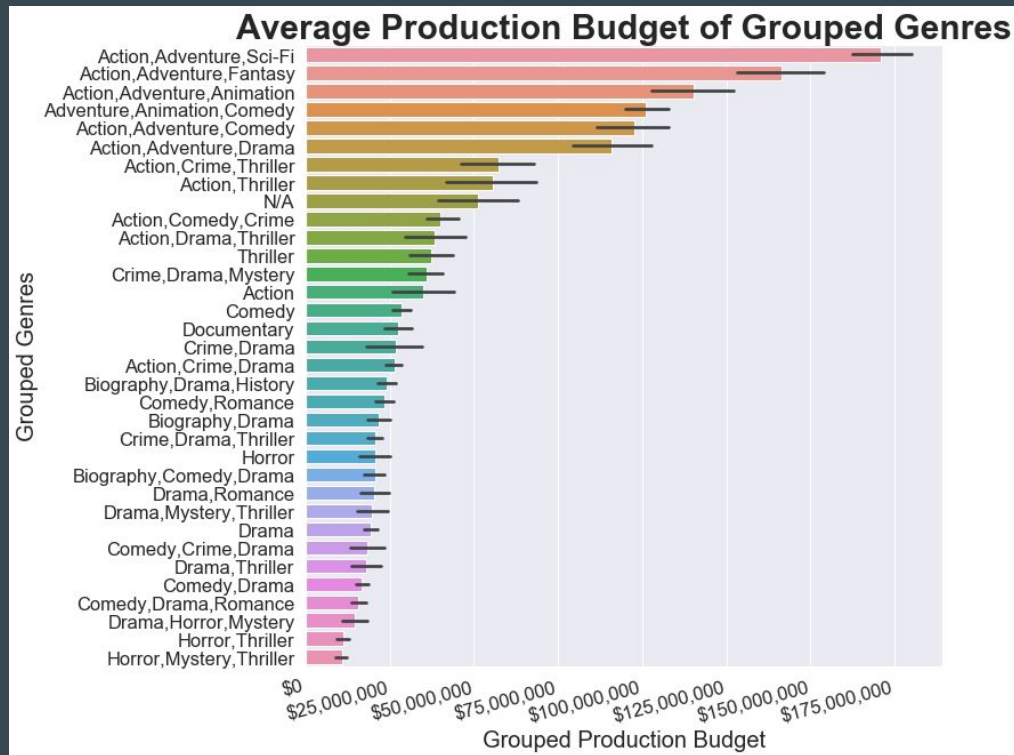Association Between Runtime Minutes and Budget of Movies
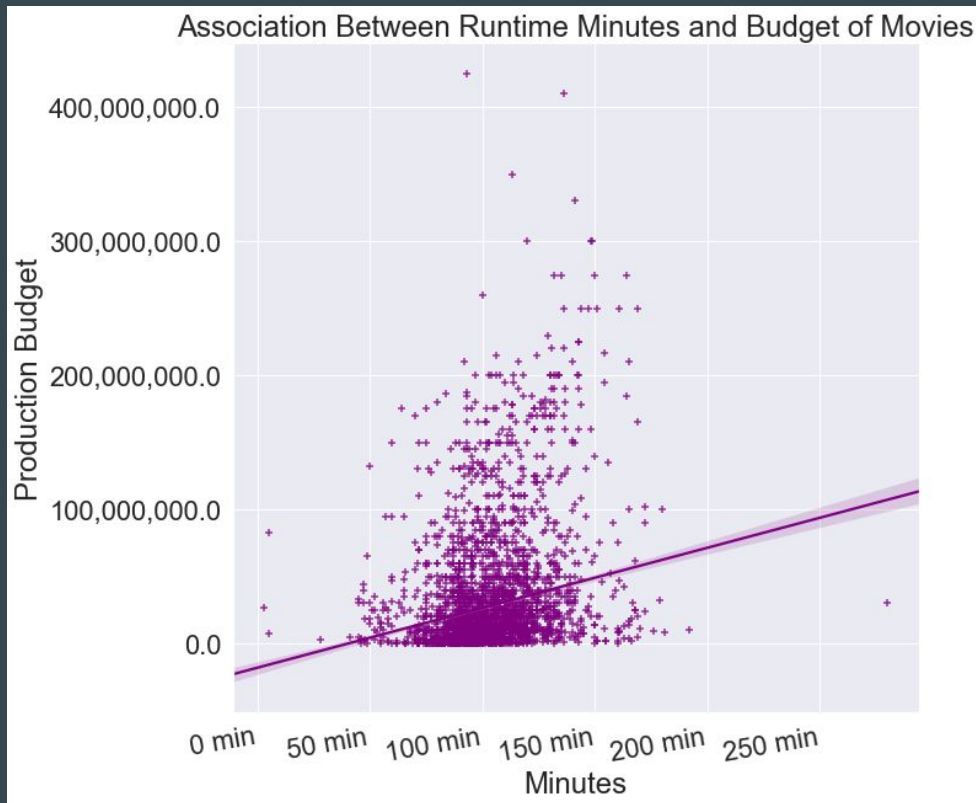
There is a slight positive correlation between runtime minutes and production budget.

Comparing Selected Grouped Genres V. Runtime Minutes

Very slight positive correlation between runtime minutes and net profit within these selected group genres.

Average Budget for Grouped Genres

Average Production Budget of Grouped Genres

Grouped Genres (top to bottom):
Action,Adventure,Sci-Fi
Action,Adventure,Fantasy
Action,Adventure,Animation
Adventure,Animation,Comedy
Action,Adventure,Comedy
Action,Adventure,Drama
Action,Crime,Thriller
Action,Thriller
N/A
Action,Comedy,Crime
Action,Drama,Thriller
Thriller
Crime,Drama,Mystery
Action
Comedy
Documentary
Crime,Drama
Action,Crime,Drama
Biography,Drama,History
Comedy,Romance
Biography,Drama
Crime,Drama,Thriller
Horror
Biography,Comedy,Drama
Drama,Romance
Drama,Mystery,Thriller
Drama
Comedy,Crime,Drama
Drama,Thriller
Comedy,Drama
Comedy,Drama,Romance
Drama,Horror,Mystery
Horror,Thriller
Horror,Mystery,Thriller

X-axis: Grouped Production Budget — $0, $25,000,000, $50,000,000, $75,000,000, $100,000,000, $125,000,000, $150,000,000, $175,000,000

Y-axis: Grouped Genres

The top genres for budget cost are also top for avg. net profit.

Invest more to gain more!