Phase 2 Project Presentation

Alexandra Yakovleva, April 9 2024.

Business Problem.

Stakeholder:

A newly-established movie-studio with no background in movie industry.

Stakeholder's questions:

1. What movies are currently performing well in box office?

2. What recommendations can we provide to improve potential box office performance?

Proposed Solution.

- Identify the most profitable movie genres.

- Identify key movie metrics* affecting box office success.

- Explore the impact of selected metrics* for each genre.

- Recommend optimal metric values* to maximize success for each genre.

*In the context of available box office data for a genre.

Datasets.

- Kaggle:
  - Oscar Awards.
  - Golden Globe Awards.
  - TMDB Dataset*.
  - Movies with Content Ratings*.
- IMDB Dataset.
- The Movie Dataset*.

*Dataset has movie budget and gross box office data.

Data Manipulation.

- For all datasets, performed standard data cleaning.
- For TMDB, IMDB datasets, added various movie metrics from corresponding subsets.
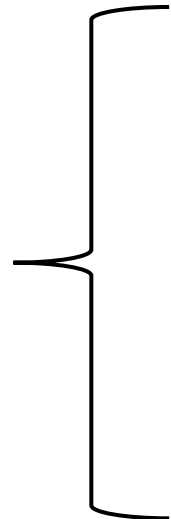- Combined TMDB, IMDB datasets.

Top 10 Most Profitable Genres.
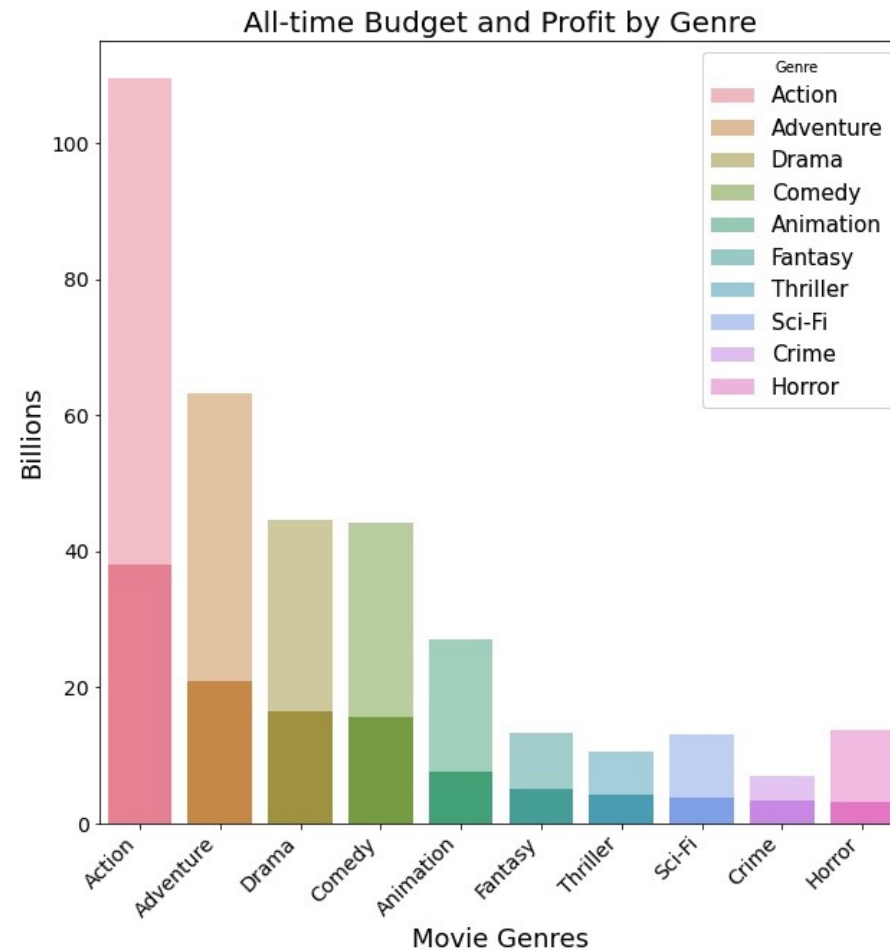
Action is the most expensive and most profitable genre.
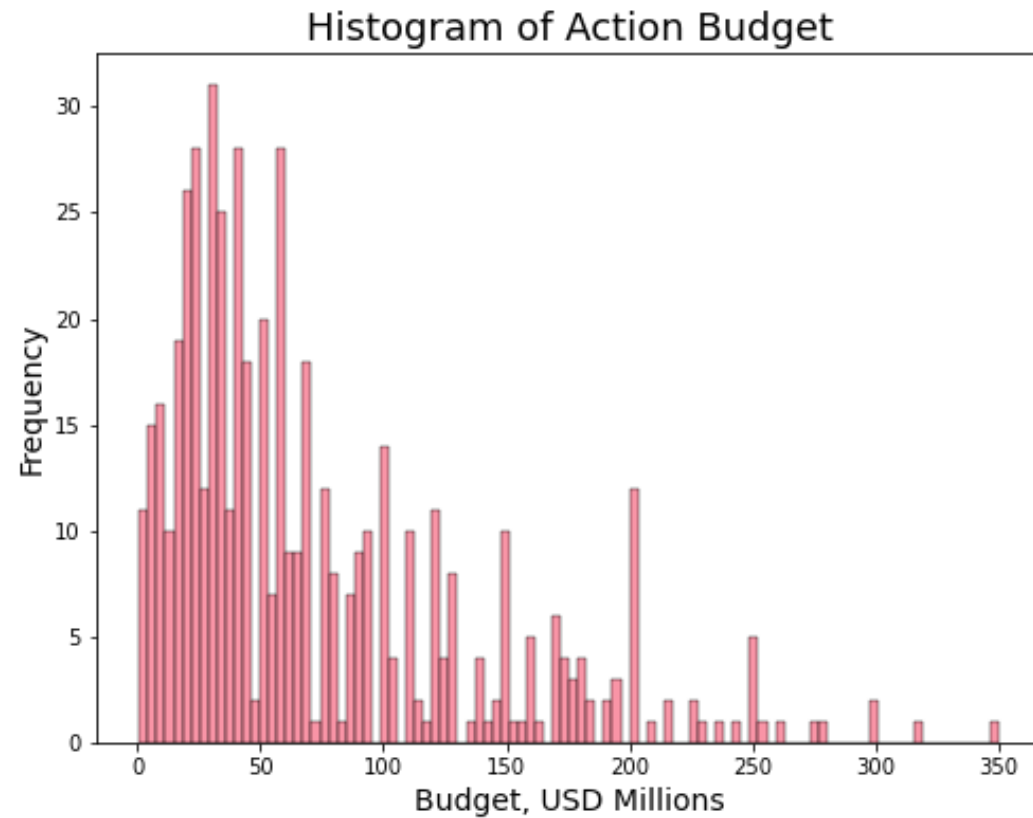
Movie Key Profit Metrics.

Movie Profit

- Movie Budget
- Movie Genre.
- Release Time.
- Movie Duration.
- Content Rating.
- Cast and Crew.
- Accolades.

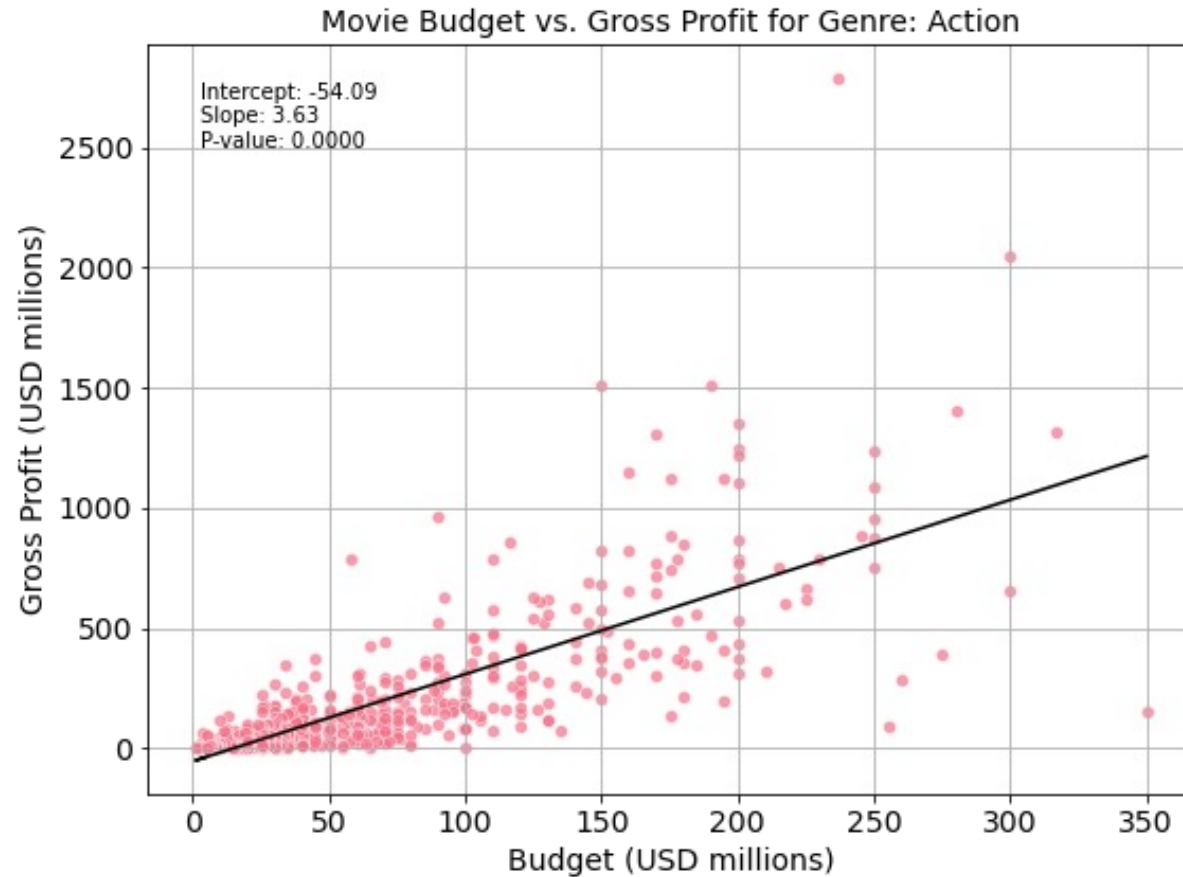# Action: Profit Analysis using Key Metrics.

- Budget, Profits.
- Release Time.
- Movie Duration.
- Content Rating.
- Sub-Genre.
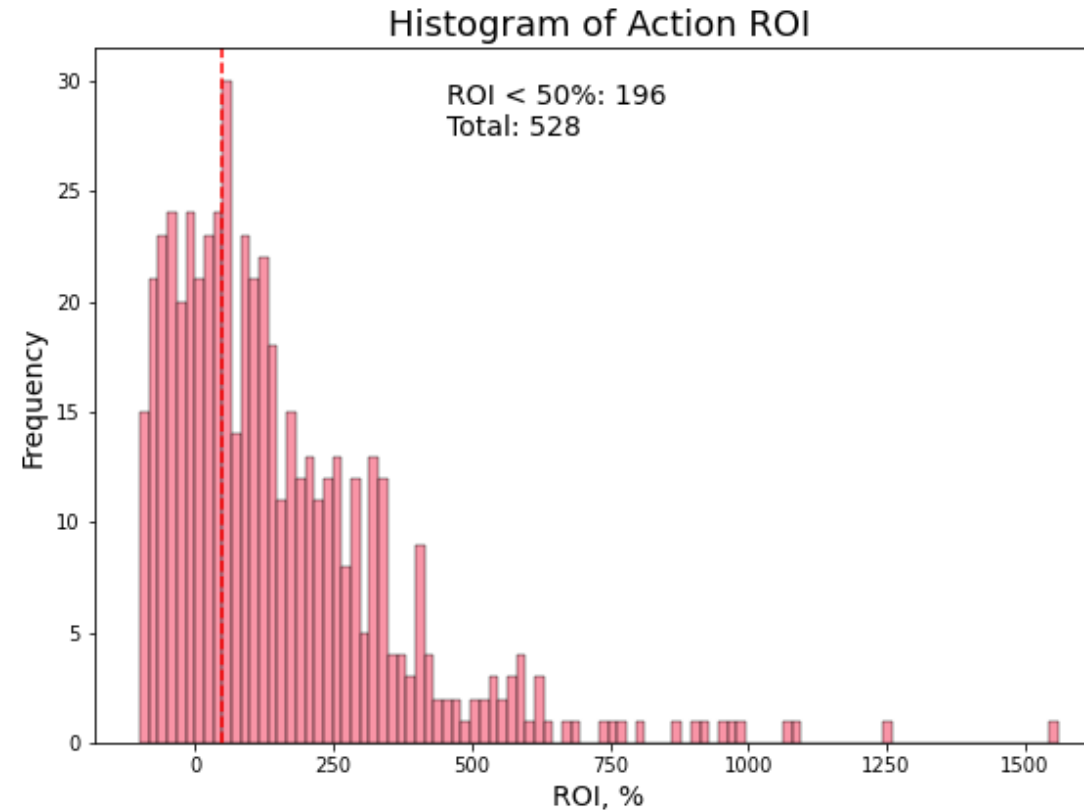- Cast and Crew.
- Accolades.

Action: Budget and ROI.

Median Action Budget is 50-100 millions.
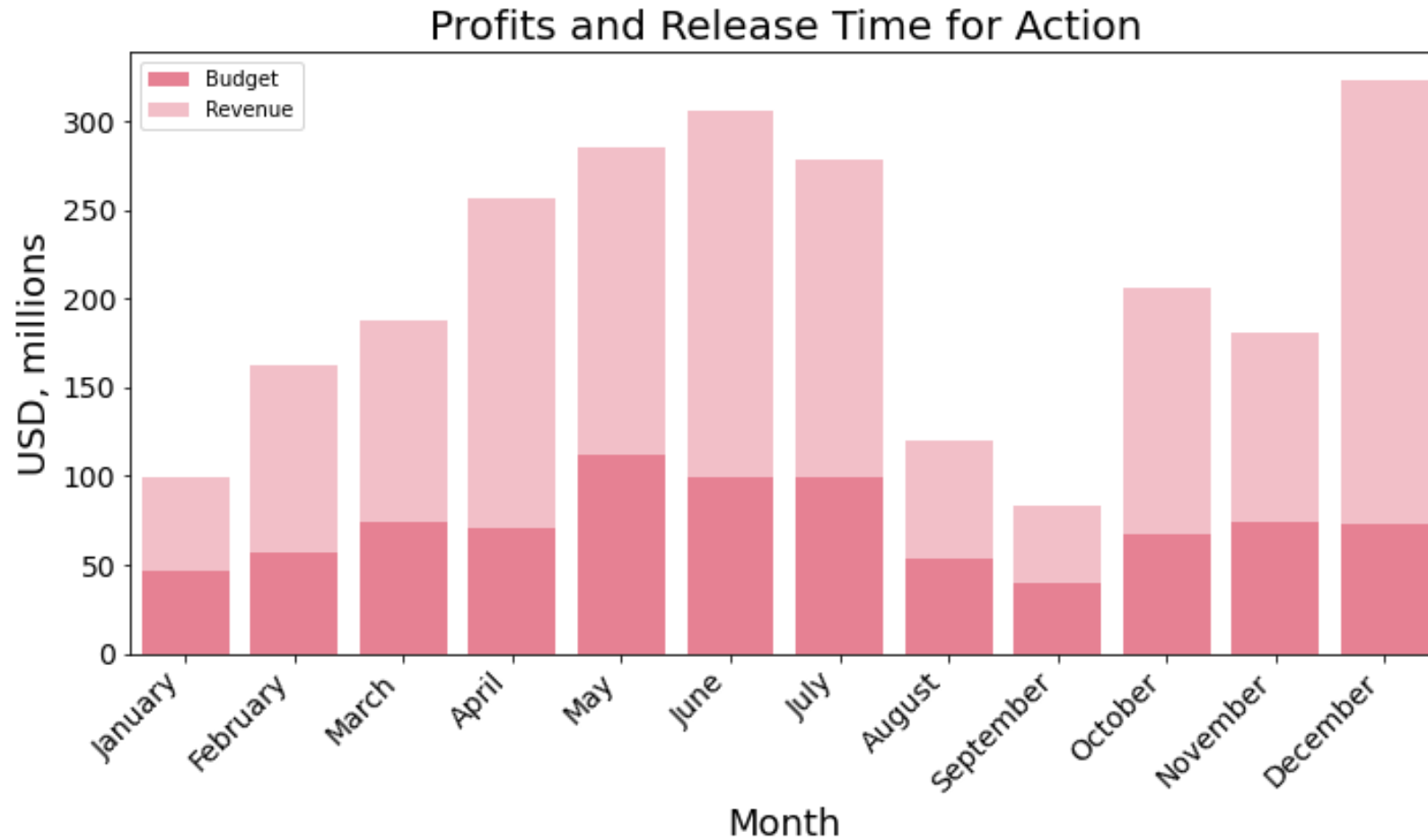
Action: Modelling Expected Profits.

For every million invested, average return is 3.63 millions.
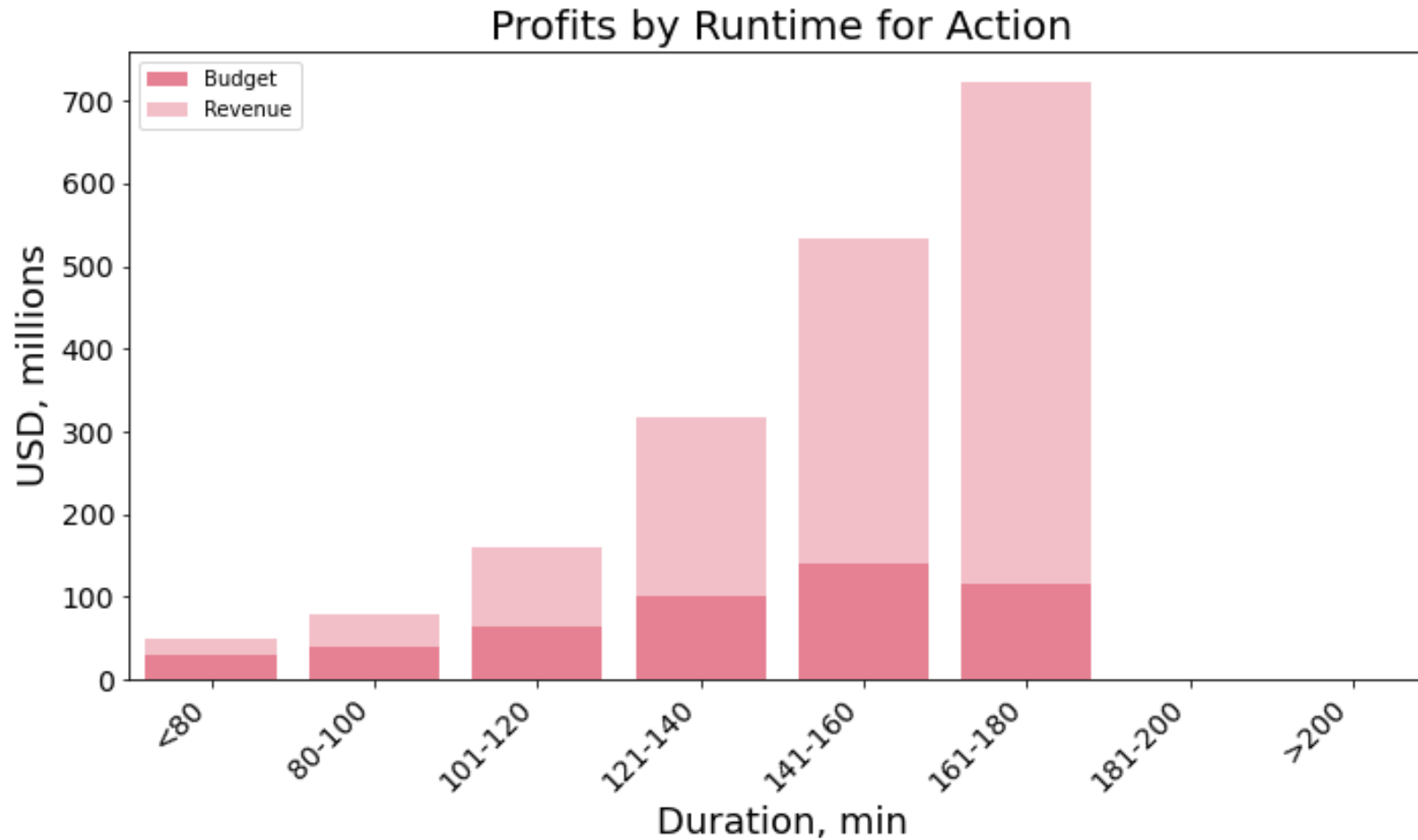
Action: Hight Risk and High Reward.

Action genre has 37% of movies with ROI<50%.

Action: Recommended Release Time.

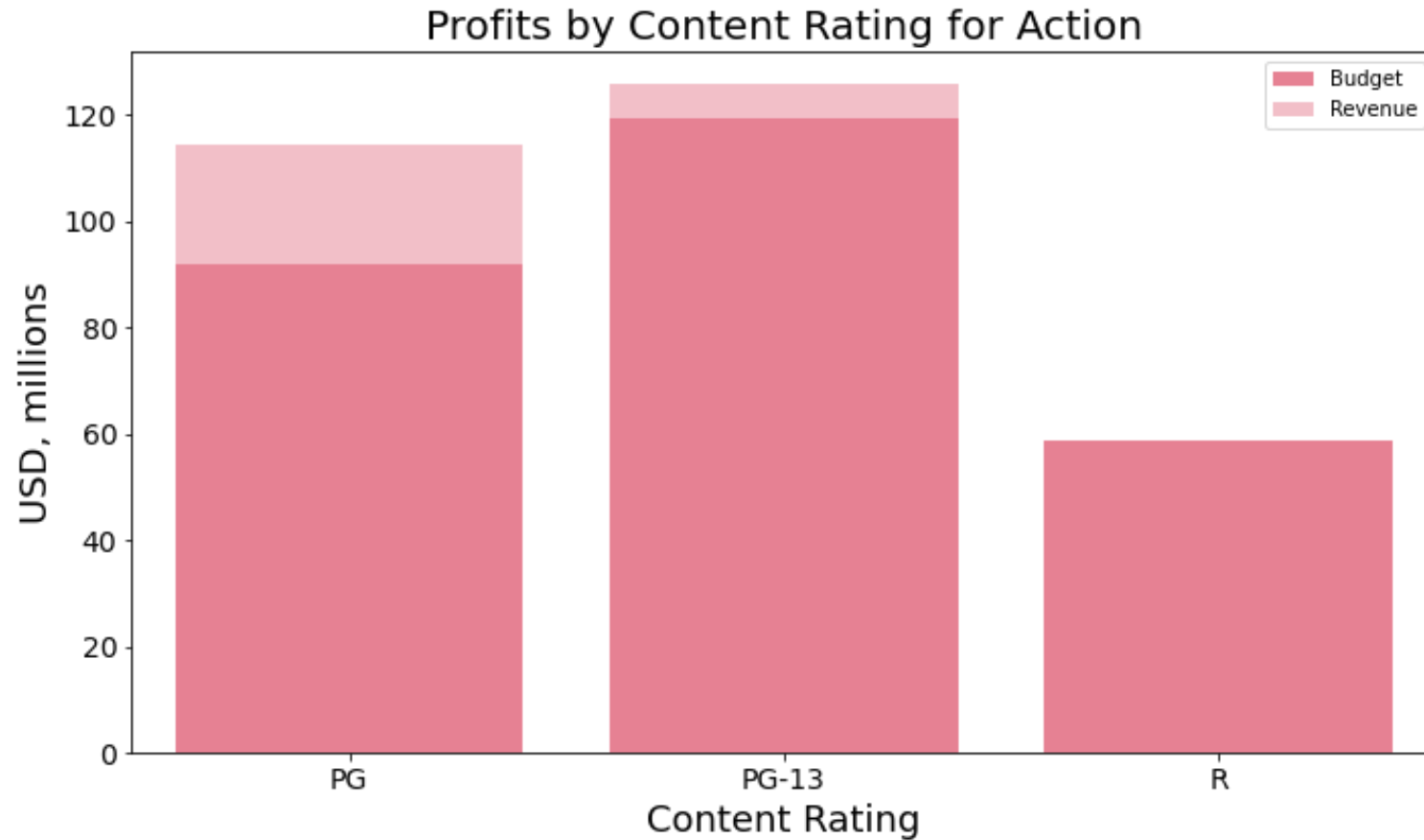Profits and Release Time for Action

Movies released in summer and holiday season have the largest gross b.o..

Action: Recommended Movie Duration.

Longer movies perform better in box office.
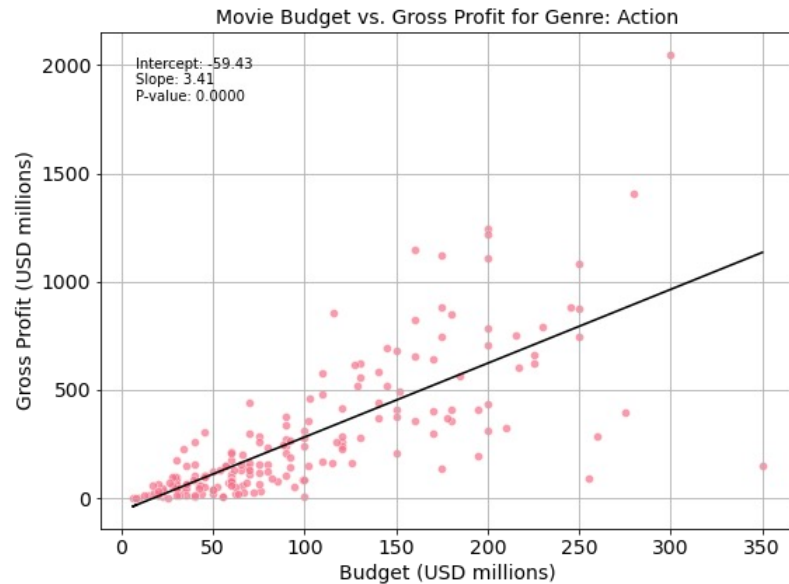
Action: Recommended Content Rating.

Family-Friendly movies have bigger revenue.

Action: Recommended Sub-Genres.

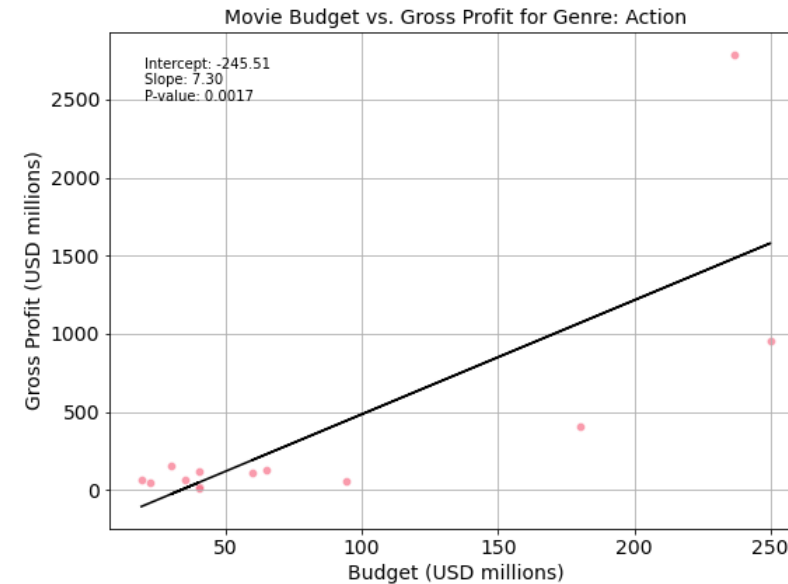Most profitable sub-genres for Action

Subgenres Adventure, War, Sci-Fi have largest gross.
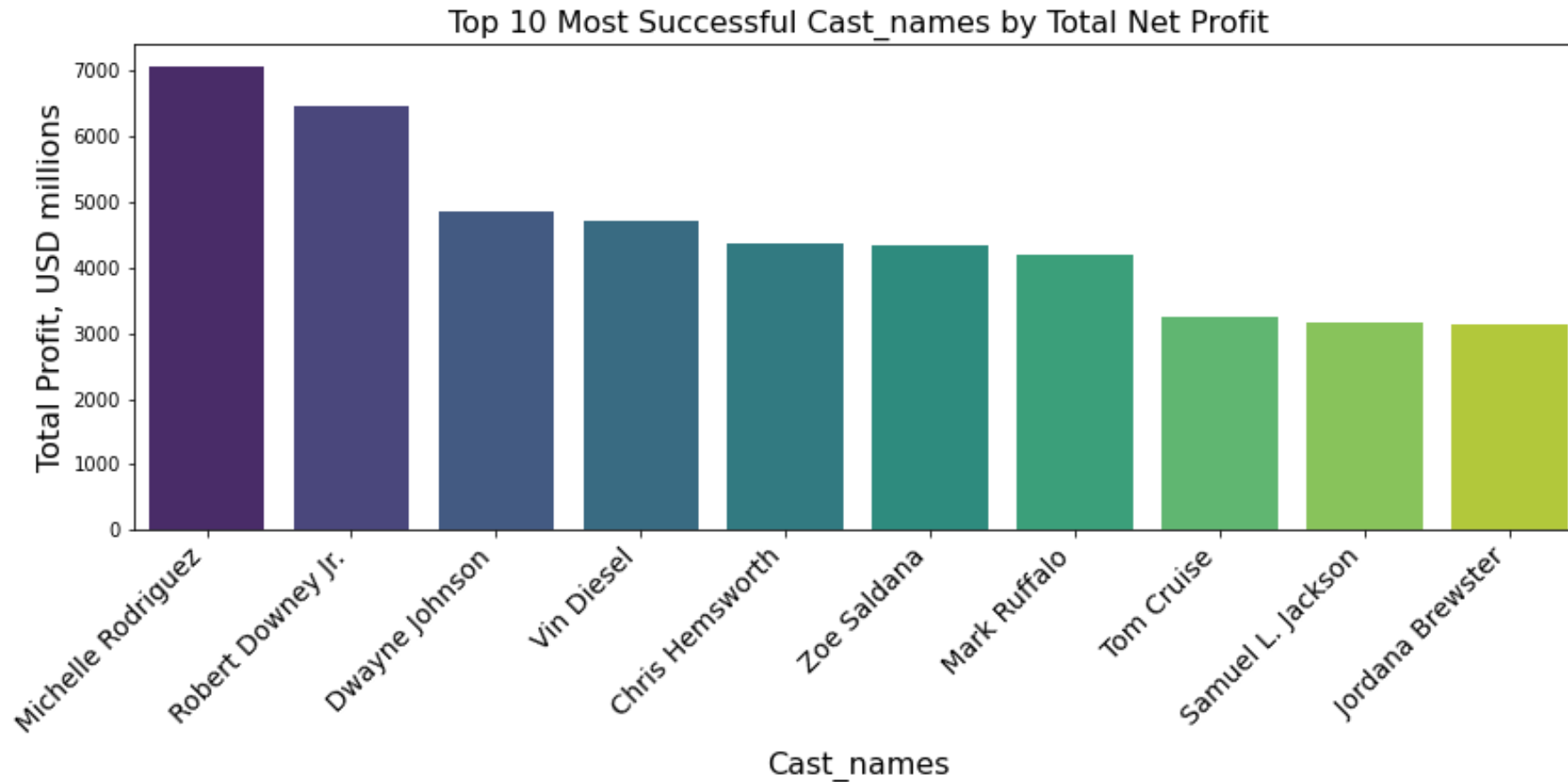
Action: Critically Acclaimed Cast/Crew.

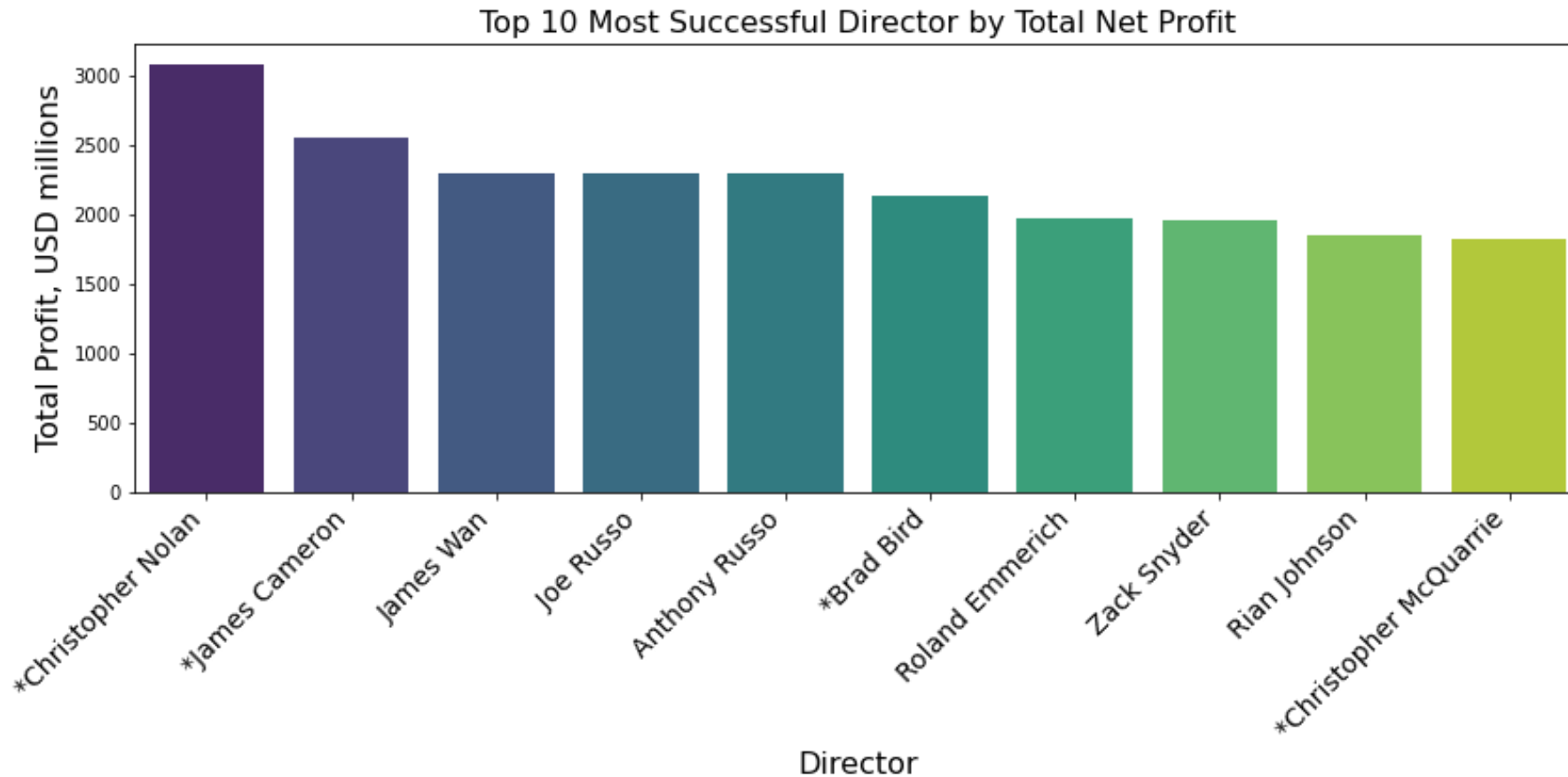*Expected return coefficient for $1 with critically acclaimed cast: **3.41.***

*Expected return coefficient for $1 with critically acclaimed cast: **7.3.***
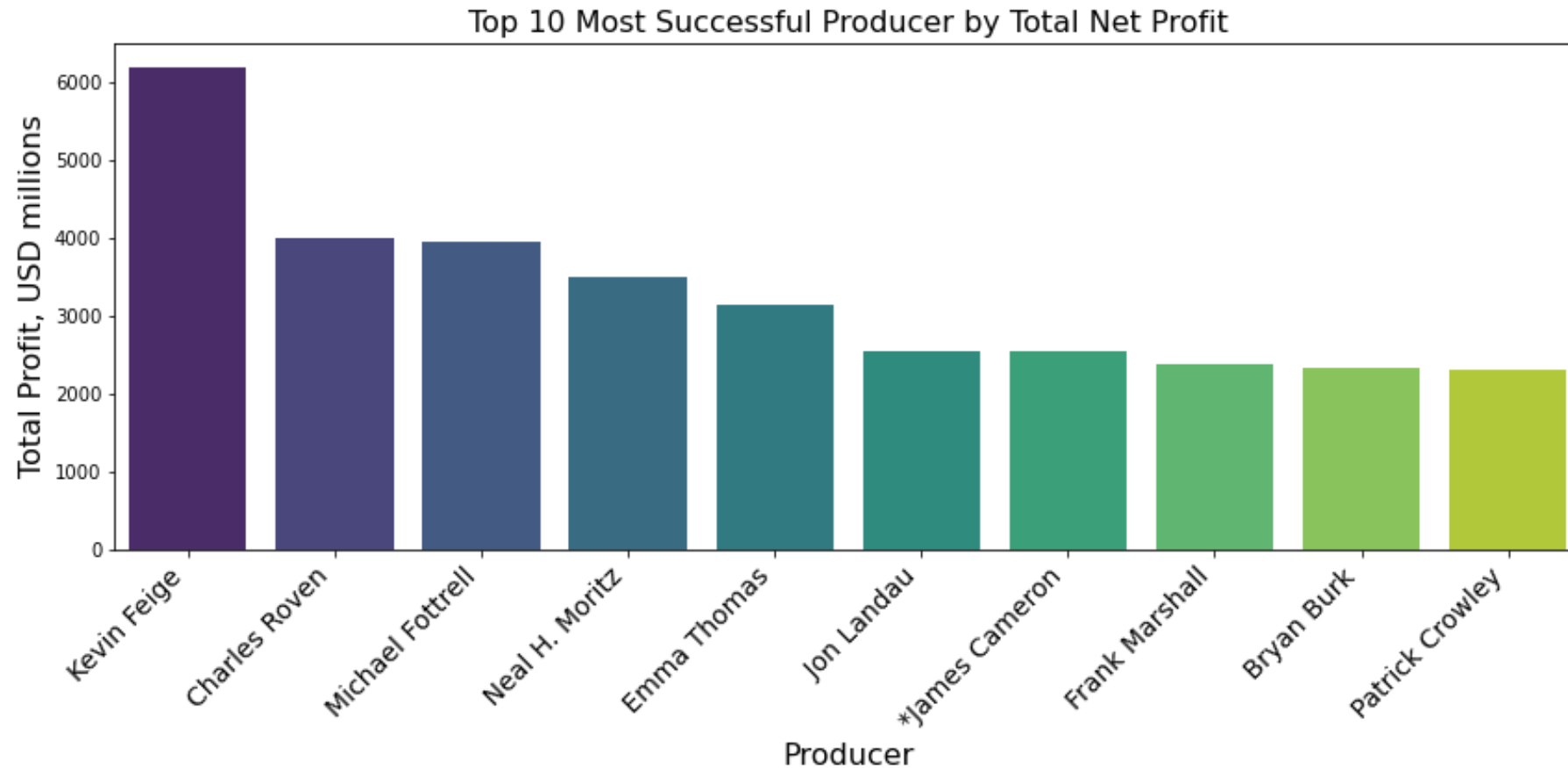
Action: Recommended Cast.

Top 10 Most Successful Cast_names by Total Net Profit

Action: Recommended Crew (Directors).

Top 10 Most Successful Director by Total Net Profit

Oscar/Golden Globe Award.

Action: Recommended Crew (Producers).

Top 10 Most Successful Producer by Total Net Profit

Action: Conclusion.

Key Feature	Recommended Value
Budget	$100+ million
Content Rating	PG, PG-13
Release Time	Early Summer, Christmas
Duration	2-3 hours
Subgenres	Adventure, Sci-Fi.
Expected Return Coefficient	3.6
Hire Acclaimed Cast	No
Hire Acclaimed Crew	Yes

Future work.

- Source Better Data.
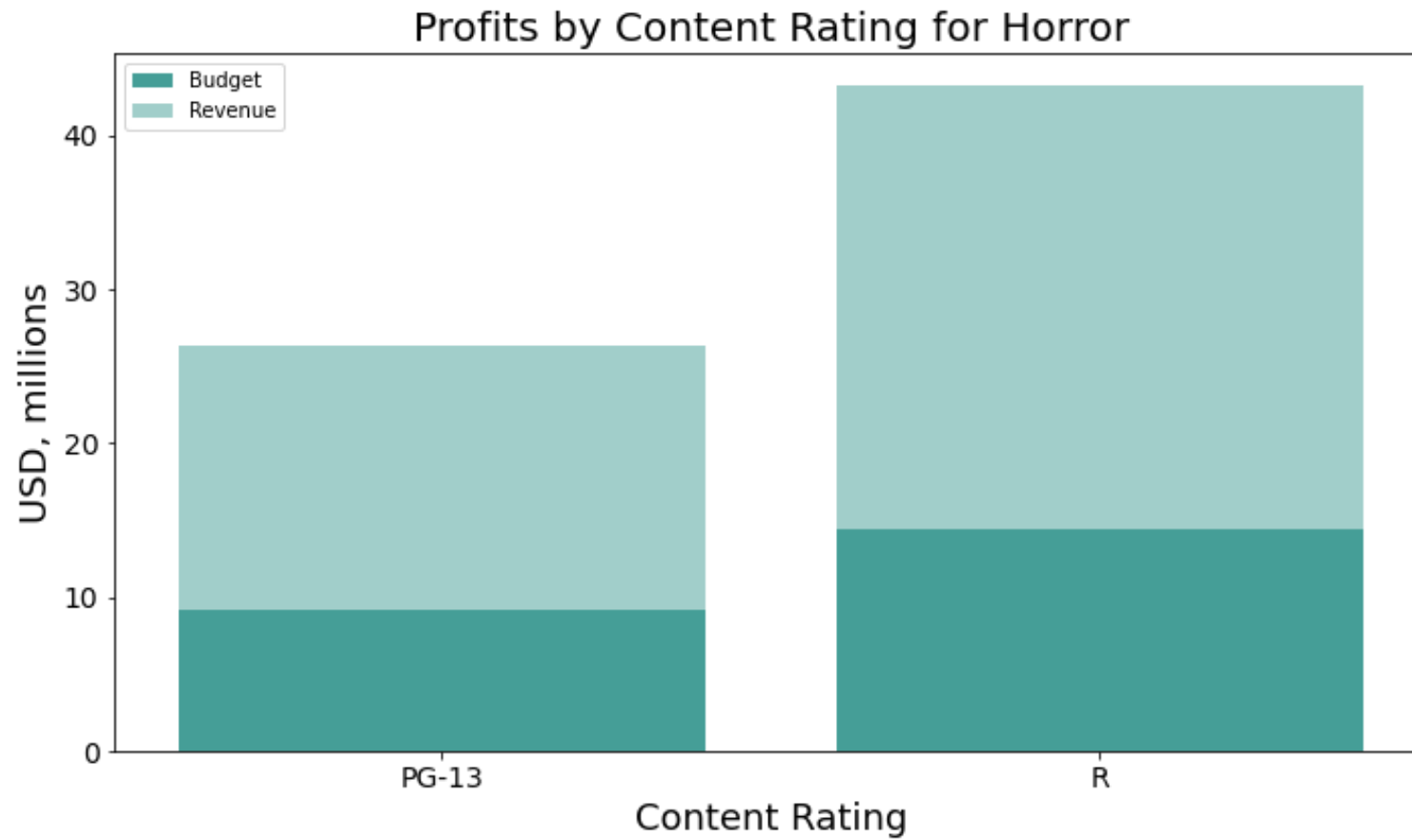- Consider Franchise Revenue.
- Consider Movie Streaming Revenue.

Digital media revenue in the United States from 2017 to 2027, by segment (in billion U.S. dollars)

Legend: Video Games, Video-on-Demand, ePublishing, Digital Music

Source
Statista Digital Market Insights
© Statista 2024

Additional Information:
United States; 2017 to 2027
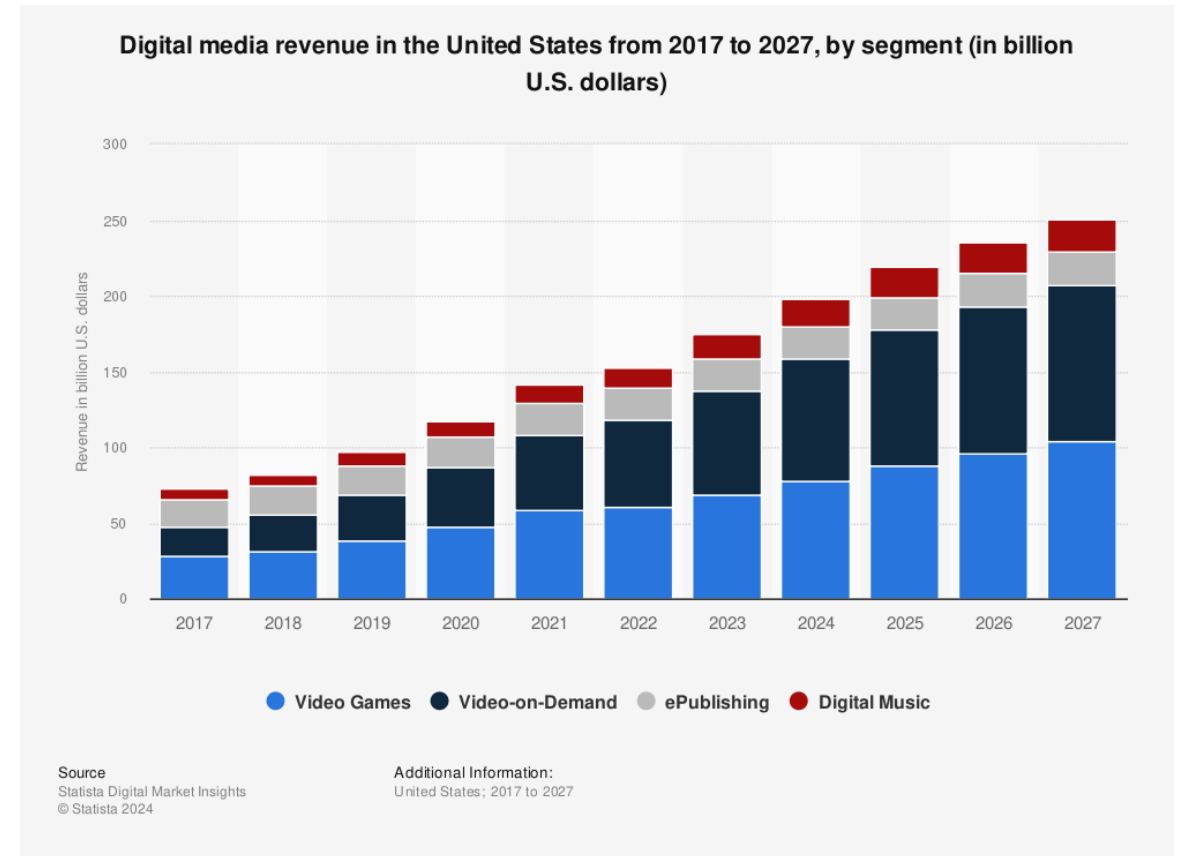
Thank you!

Extra slides (Horror)

Horror: Budget and ROI.
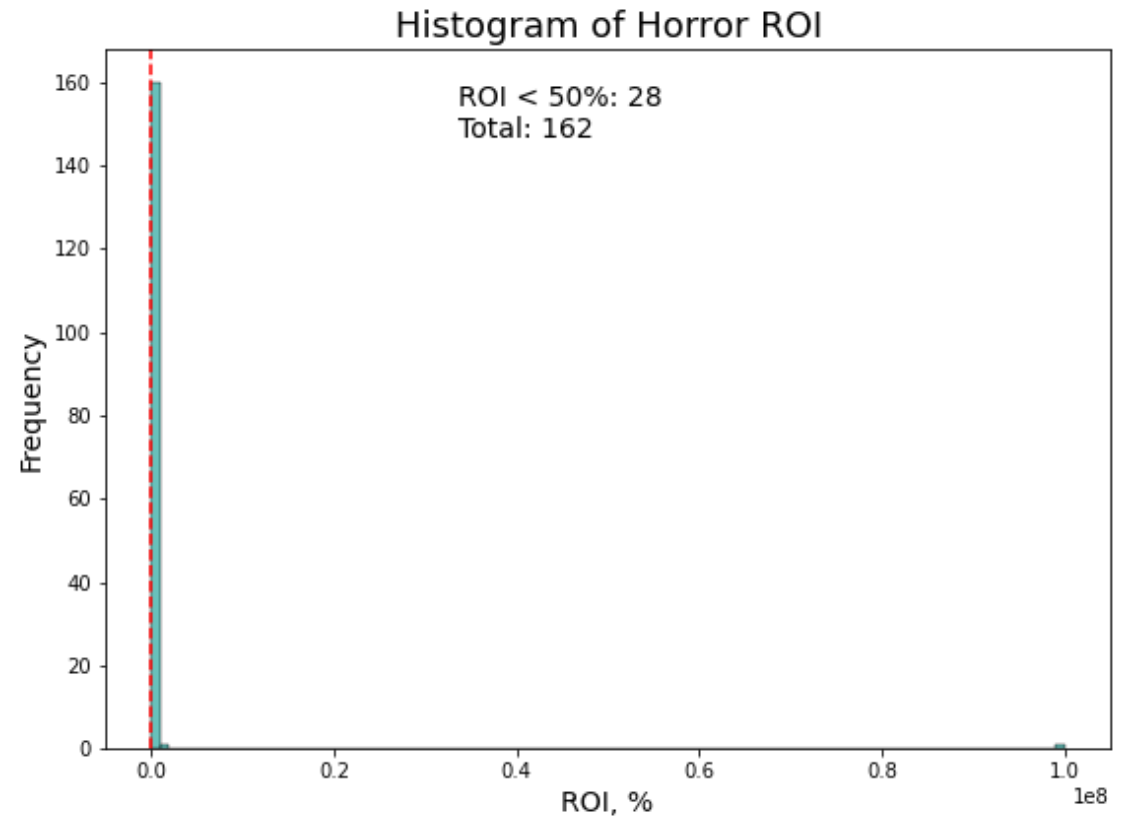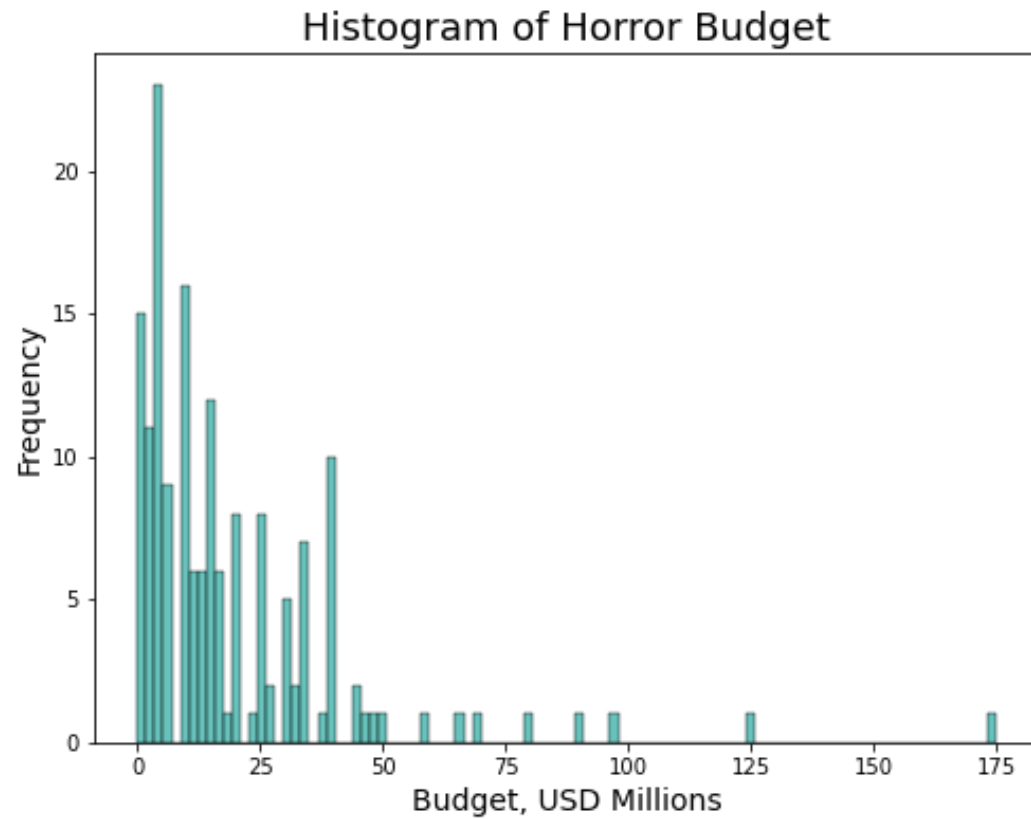
Horror: Content Rating.

Horror: Duration.

Profits by Runtime for Horror
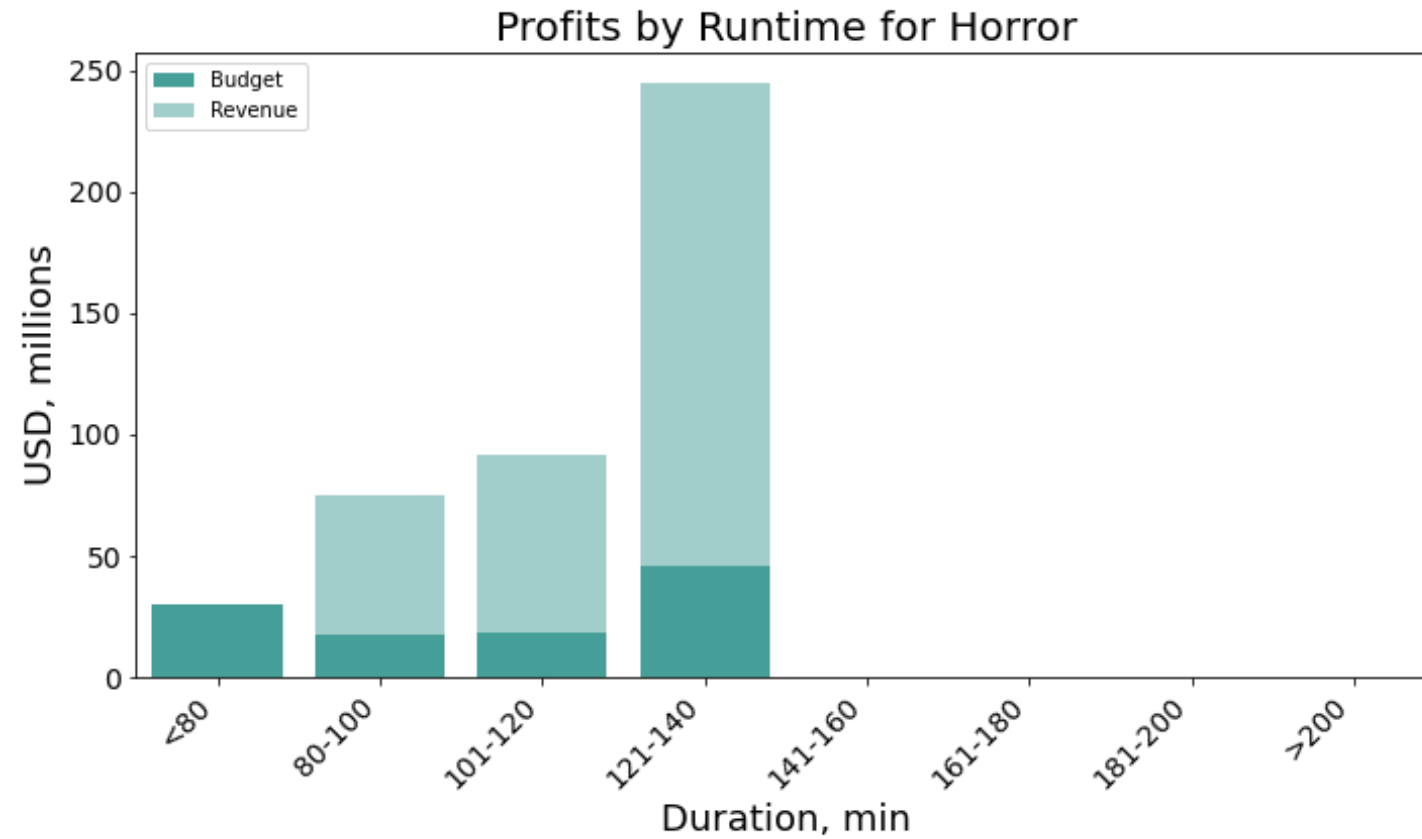
Horror: Release Time.

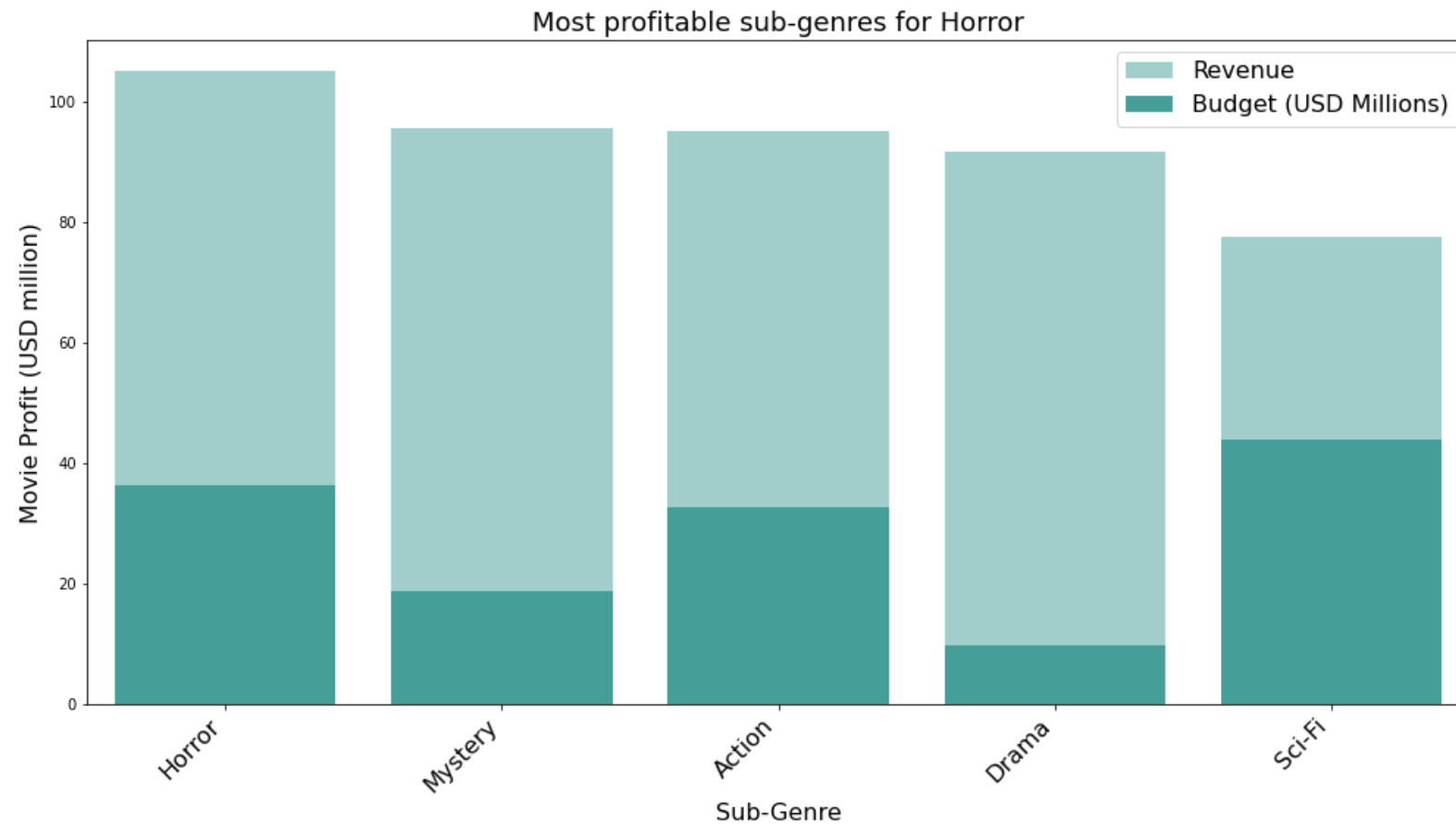# Horror: Subgenres.

Most profitable sub-genres for Horror
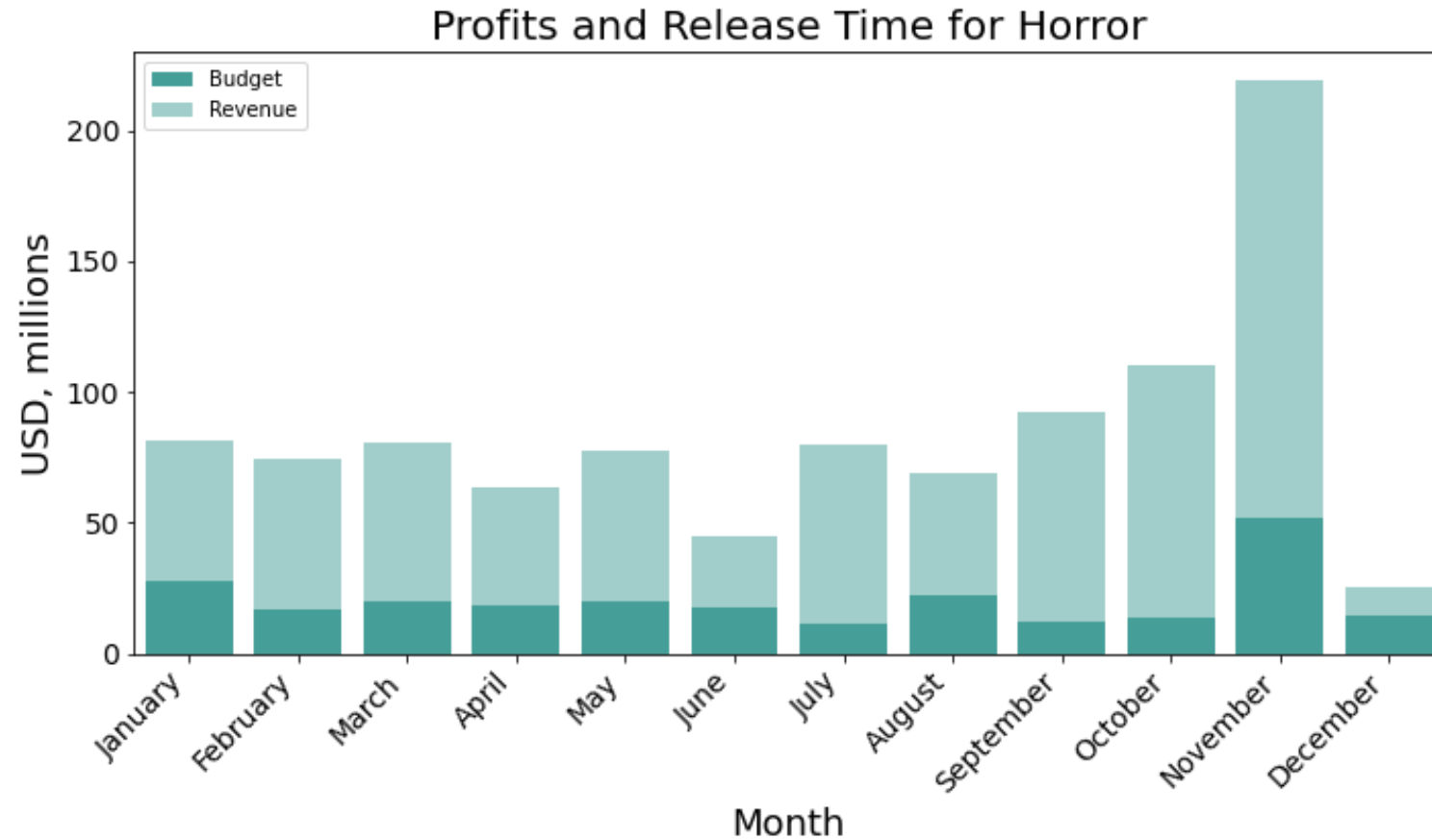
Horror: Critically Acclaimed Cast/Crew.

Movie Budget vs. Gross Profit for Genre: Horror

Intercept: 43.98
Slope: 2.08
P-value: 0.0000

Movie Budget vs. Gross Profit for Genre: Horror

Intercept: 84.64
Slope: 0.34
P-value: 0.8225