

Microsoft Movie Studio

Exploratory Data Analysis

Summary

Our analysis of movie production data generated the following insights to help launch Microsoft Movie Studio:

- Horror films performed best at the box office
- Top release month for profitable horror films is October
- Film runtime should be 90 - 105 minutes long

Agenda

- Business Problem
- Data
- Methods
- Results
- Recommendations

Business Problem


What types of movies are doing best at the box office?

Data & Methods

Extracted movie information from database including:

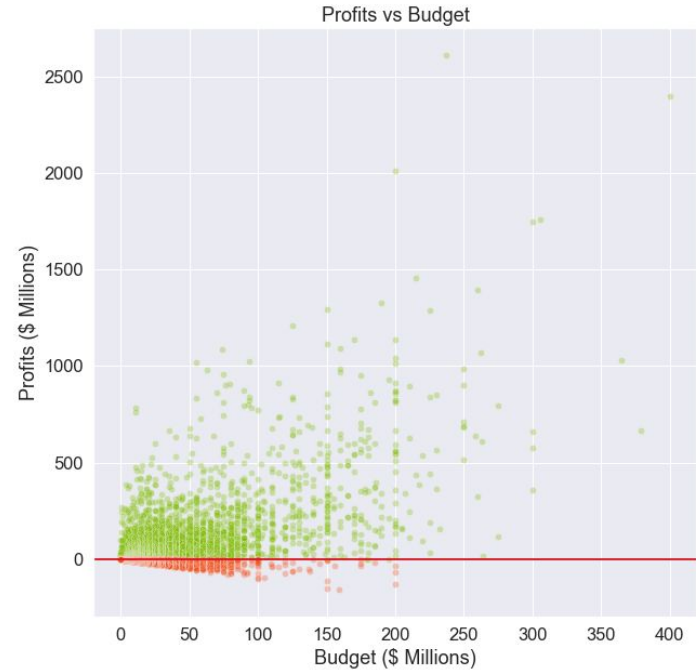
- Release date
- Runtime
- Genre
- Production budget
- Worldwide gross return

Data Preparation & Analysis:

- Created new data frames
 - Compared profitable and unprofitable movies
 - Evaluated correlation between earnings and target variables
 - Plotted variable relationships
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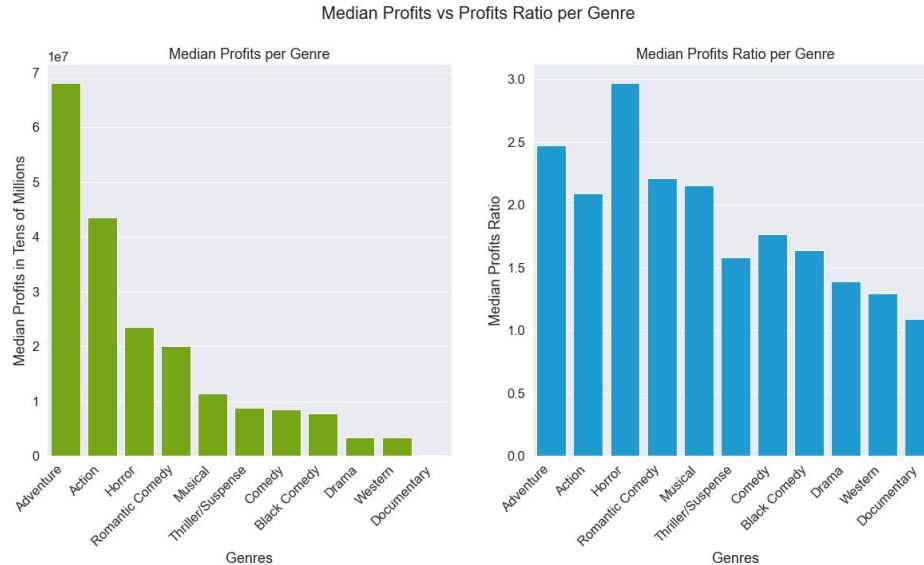
Results

The initial exploratory data analysis shows a correlation between the production budget and profitability. However, the correlation between production budget and earnings is not strong enough for us to assert that a higher budget will return higher earnings.



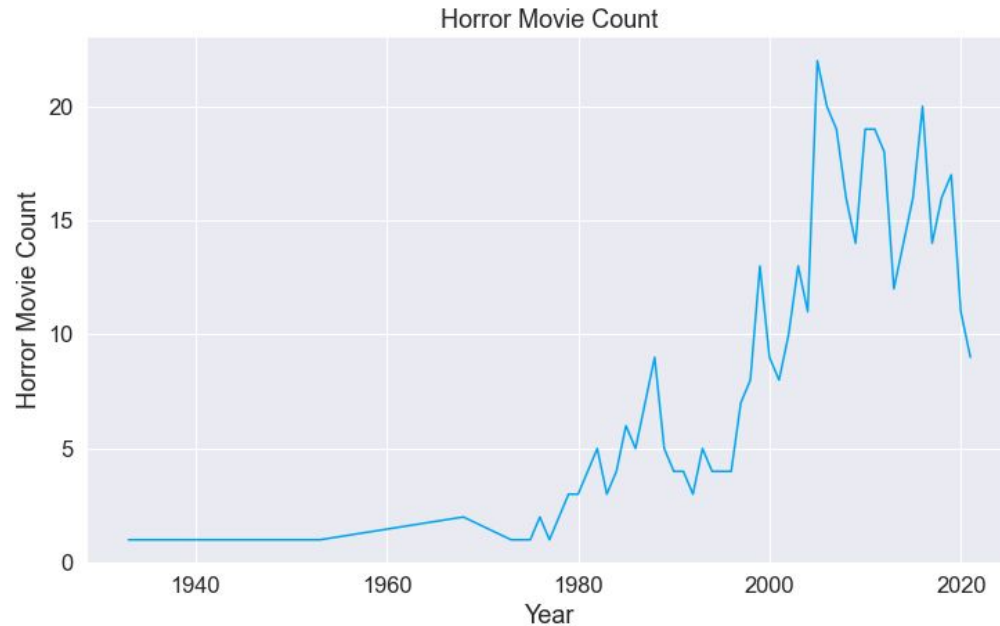
Highest performing genres

Comparing genre to rate gives a more accurate depiction of which movie genre will yield highest return. The genre that yields the highest return is horror.



Horror film performance

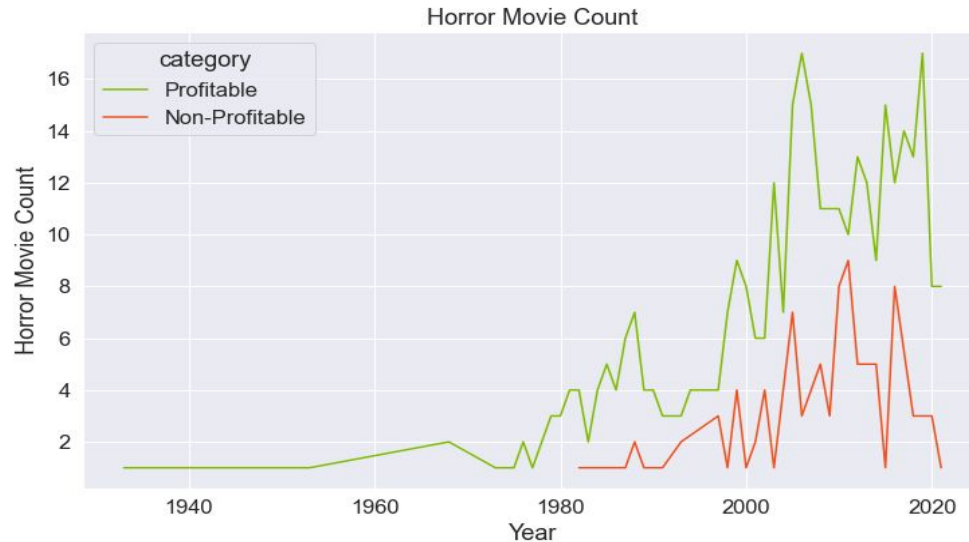
Horror movie production has increased significantly over the years.



Horror film performance

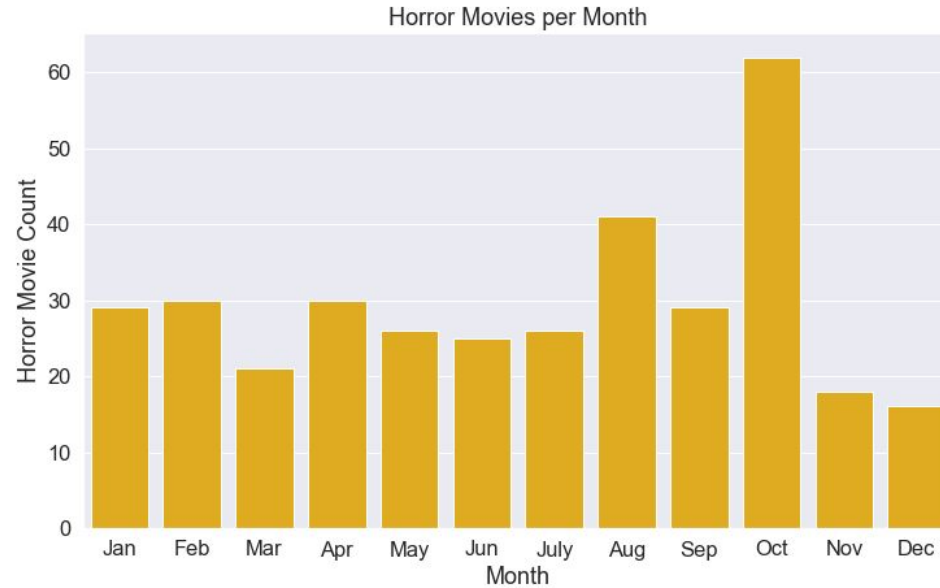
Horror movie production over the years have been mostly profitable.

79% of all horror films released yielded profit.



Movie Release Date

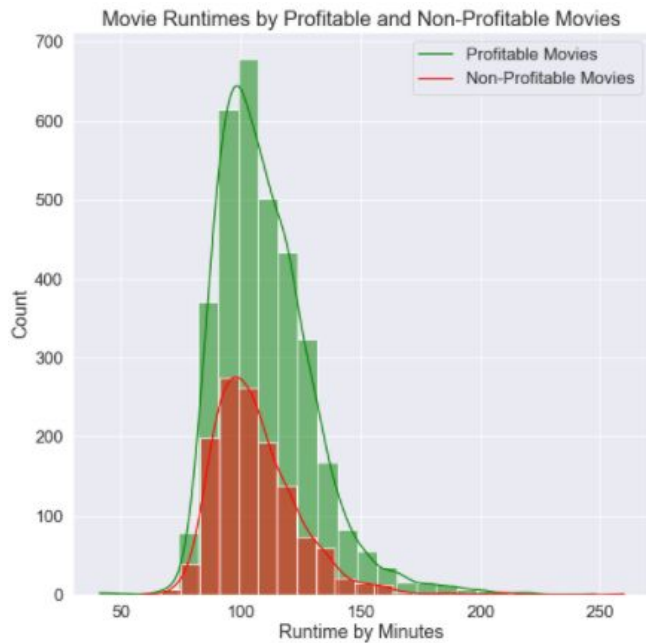
The top release month of horror films is on October.



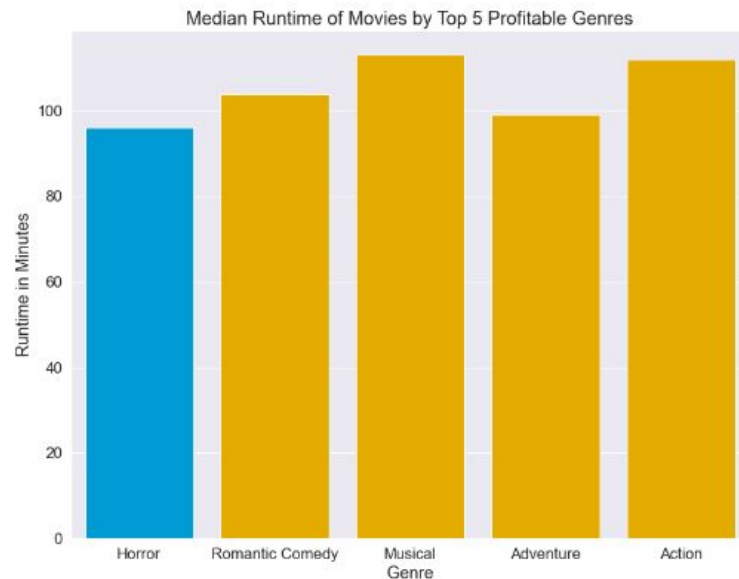
Movie Runtimes: How Long is Long Enough?

Median runtime of profitable movies: **107 minutes**

Median runtime of non-profitable movies: **103 minutes**

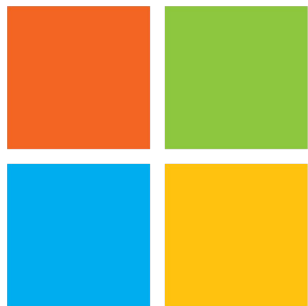


Horror movies: **96 minutes** median runtime



Business Recommendations for Microsoft Film Studio

- Produce films of the Horror genre
- Release horror films in October
- Film runtime should be 90 - 105 minutes long



Thank you

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