



Microsoft

Movie Madness

New Beginnings in the Movie Studio Industry

"I WOULD TRAVEL DOWN TO HELL AND WRESTLE A
FILM AWAY FROM THE DEVIL IF IT WAS NECESSARY."

-Werner Herzog, German filmmaker

Summary

- Microsoft's new movie studio venture
 - Concerned about how to start
- Recommendations for Microsoft Movie Studio
 - Movie Genre: Animation
 - Movie Budget: ~\$87 Million
 - Movie Runtime: ~90-100 Minutes
 - Movie Release: May/June/July

Outline

- Business Problem
- Data
- Methods
- Results
- Conclusions

Business Problem

- Microsoft's Movie Studio Worries
 - What kind of movie should we make?
 - How to define success?
 - Do certain variables influence that success?
- Three Questions
 - Does genre of movie influence profitability (and by extension budget)?
 - How does movie runtime influence profitability?
 - When should Microsoft release their first film to maximize potential profit?

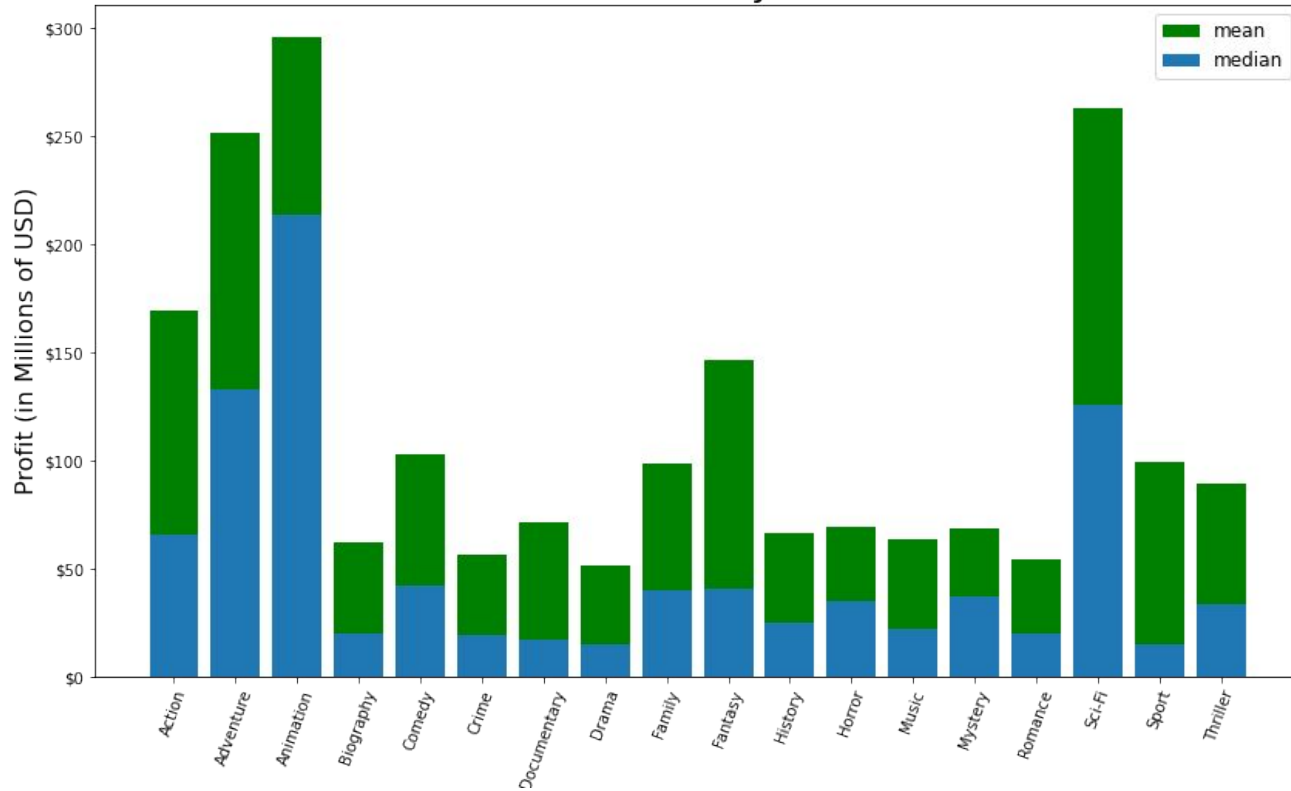
Data

- Data Used
 - [IMDB](#) Database (general movie information)
 - [The Numbers](#) Dataset (primarily used for production budget)
 - [Box Office Mojo](#) Dataset (primarily used for worldwide gross revenues)
- Added Variables
 - Profit
 - Return on Investment (ROI)
- Dataset
 - Nearly 1,500 movies
 - Covers primarily 2010 through 2018
- Target Variable
 - “Profit, Profit, Profit”

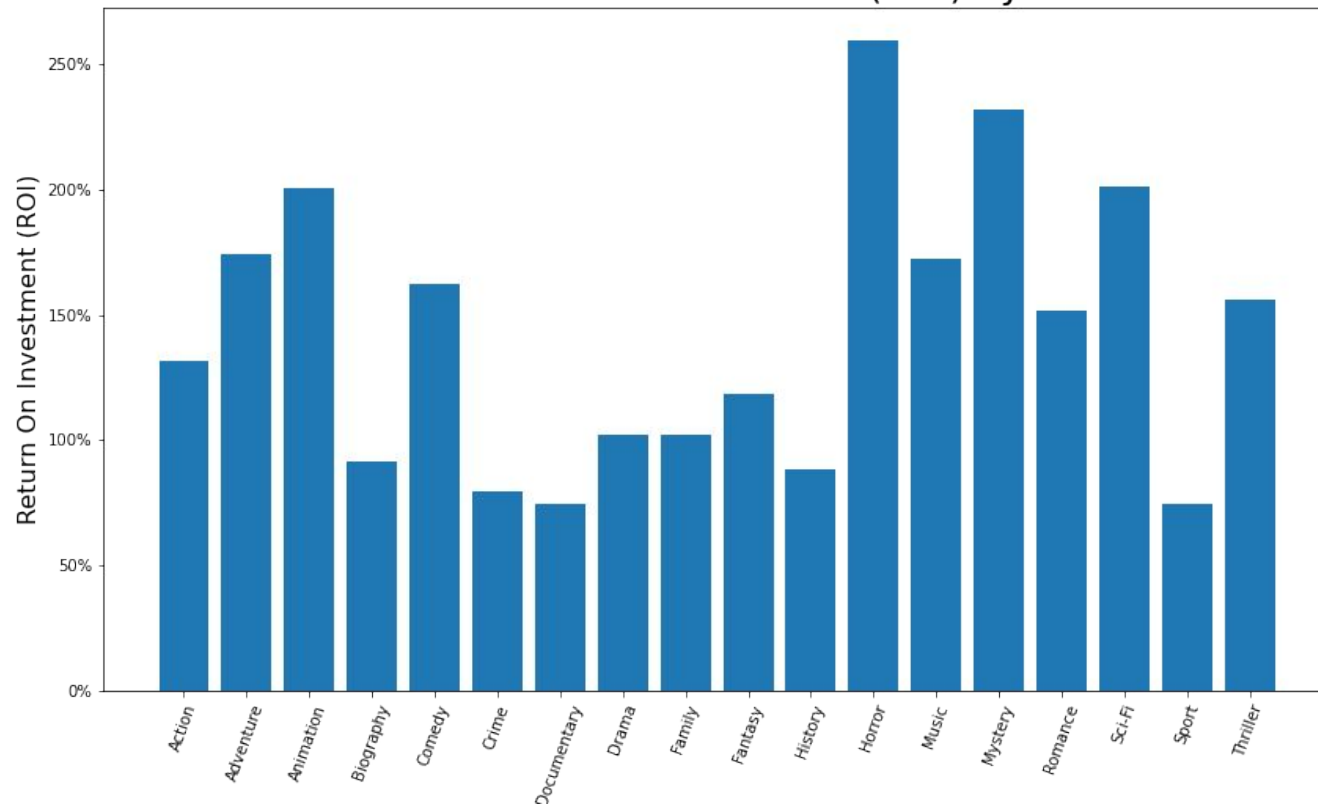
Methods

- Preparation
 - Joined all datasets together in a single table
 - Cleaned data that was unusable in current format
 - Removed data that did not contain the necessary information for our analysis
- Analysis/Modeling
 - **First Focus:** Analyzing how movie genre affects profit and budget
 - Plotting genre against profit, median budget, and median return on investment

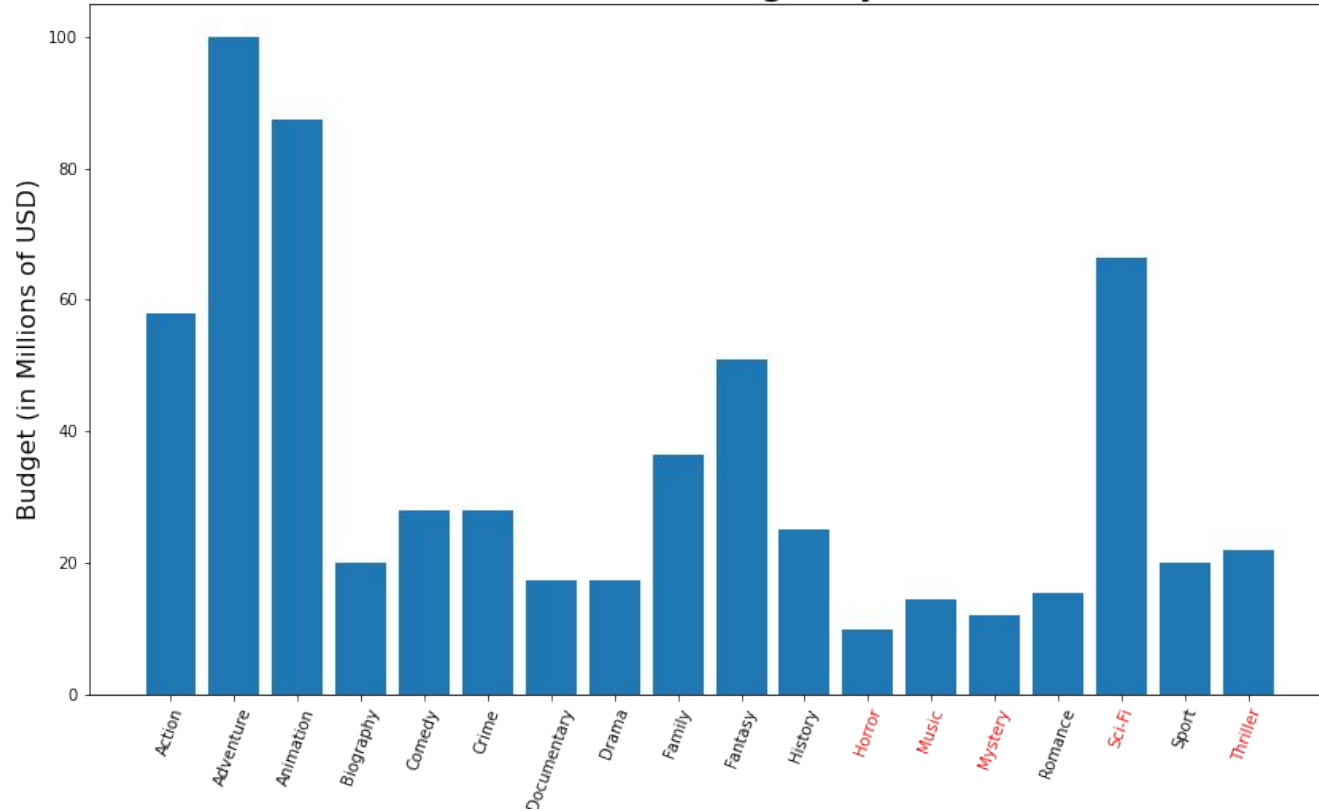
Movie Profit by Genre



Median Return on Investment (ROI) by Genre



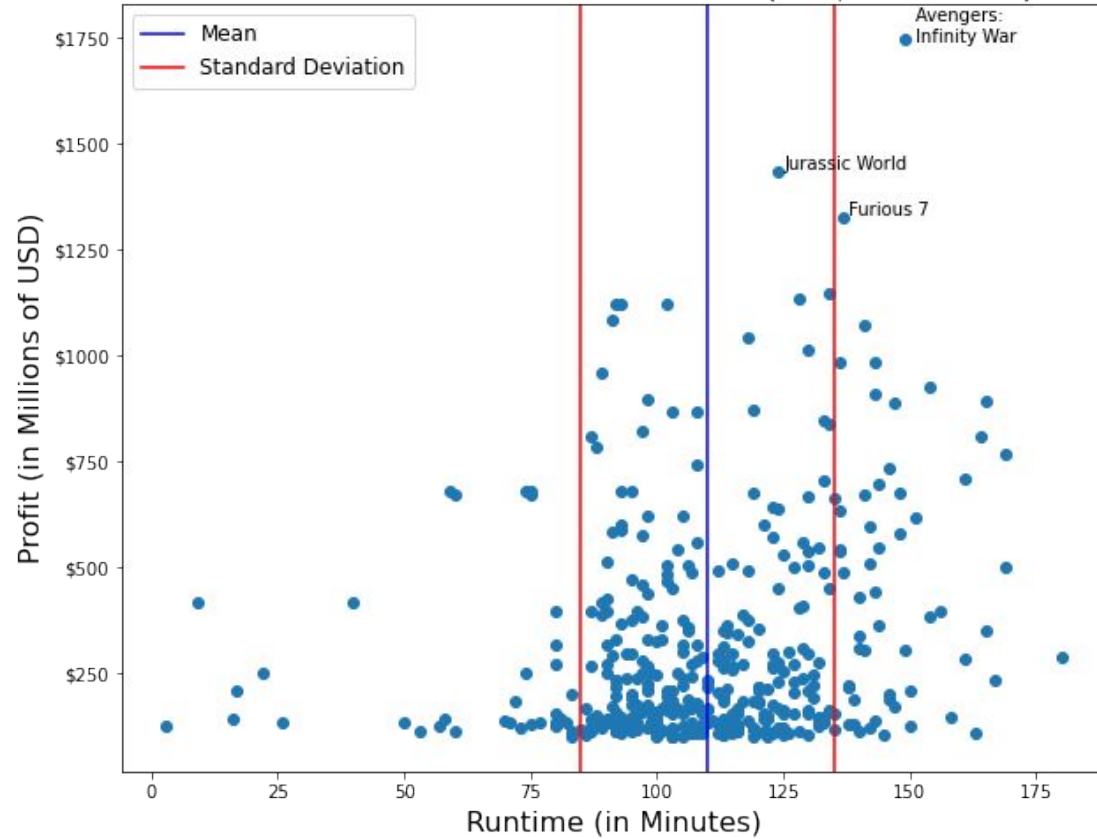
Median Movie Budget by Genre



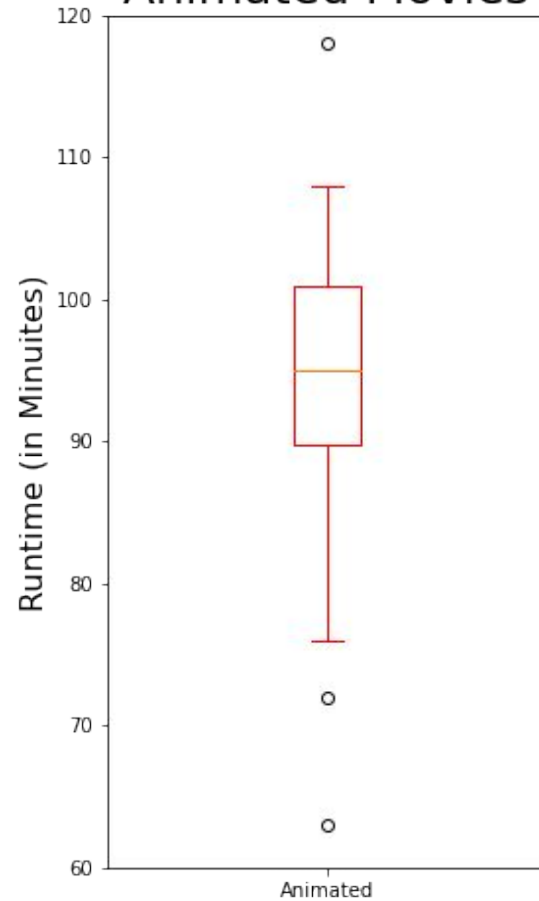
Methods - Analysis/Modeling (cont.)

- **Second Focus:** How movie runtime affects profitability and general runtime of animated movies
 - Comparing movie runtimes of:
 - > 100M Profit Films
 - Animation only

Movie Runtimes vs. Profits (> \$100 Mil)



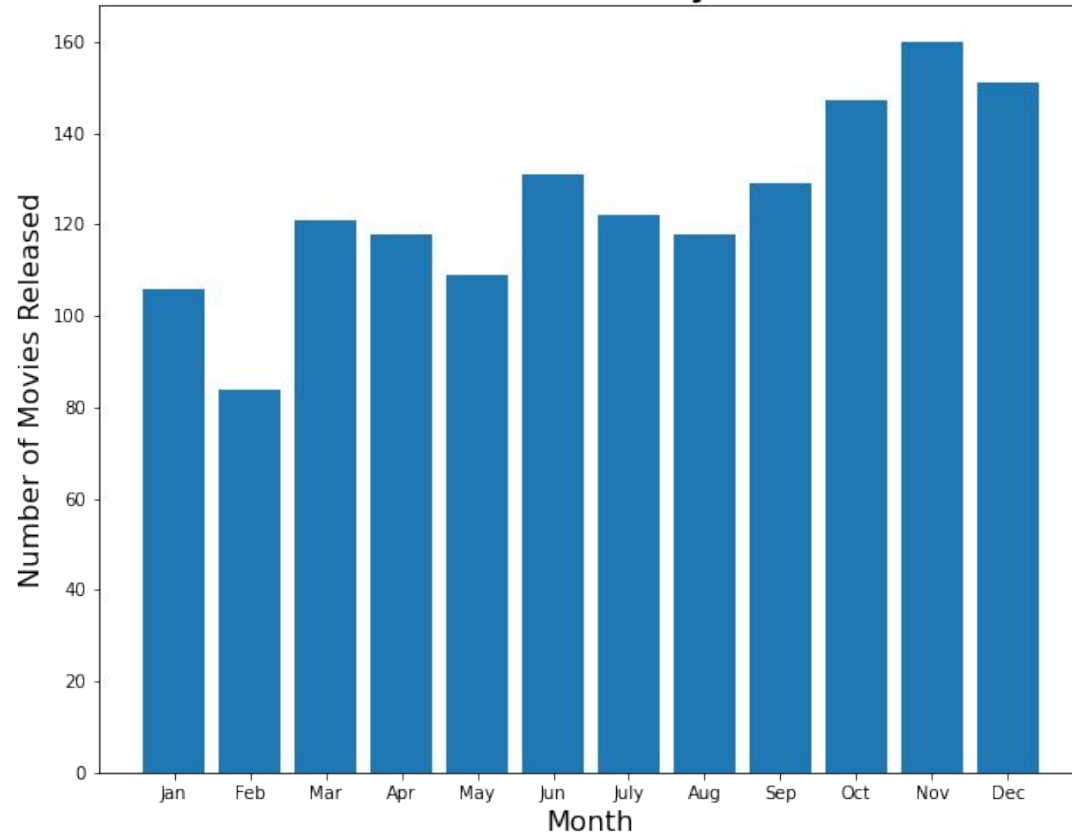
Runtime of Animated Movies



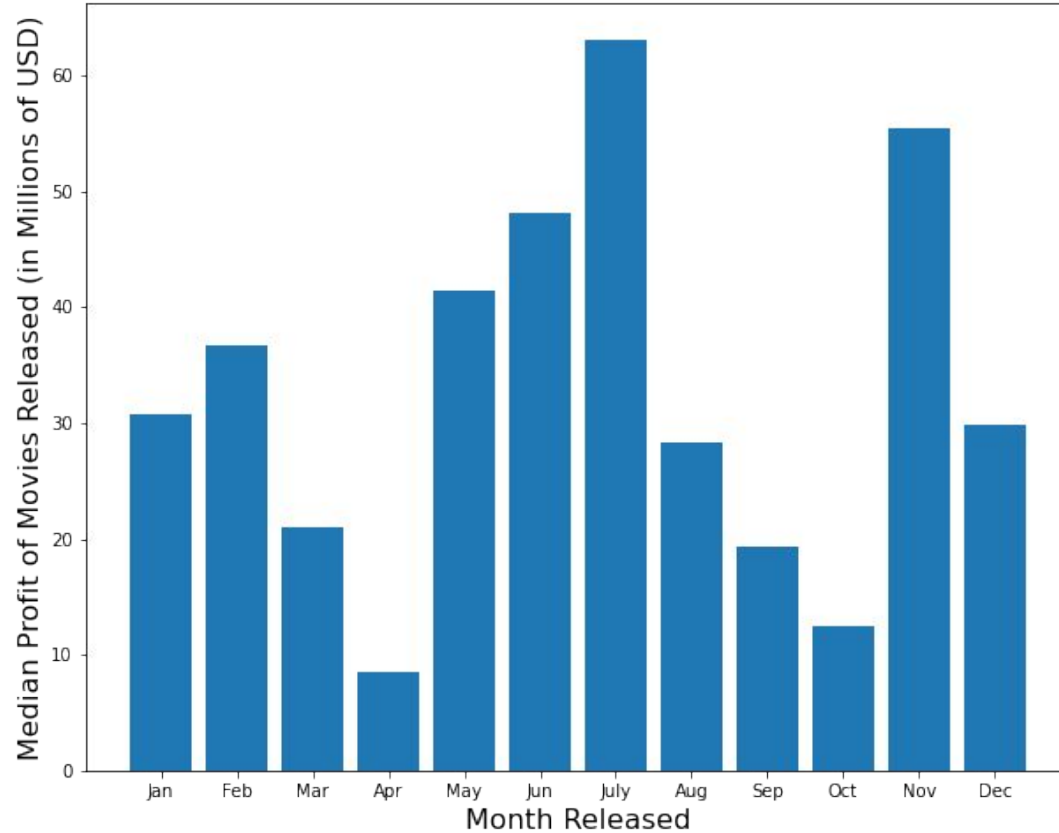
Methods - Analysis/Modeling (cont.)

- **Third Focus:** Planning a release date for Microsoft's future film by exploring revenues against release month
 - Analyzing number of releases and profits per month

Movie Releases By Month



Median Profit vs. Month of Release



Results

- **Q1: Does genre of movie influence profitability (and by extension budget)?**
 - Animation = highest profitability
 - Return on Investment shows animation as the third highest (tied)
 - Profit appears to correlate positively with budget
- **Q2: What runtime should Microsoft target?**
 - Films > \$100 Million Profit - 85 to 135 minute runtime
 - Animation films - 90-100 minute runtime
- **Q3: When should Microsoft release their film?**
 - Summer timeframe (May/June/July)
 - Alternatively winter holiday season (Nov thru Jan)

Conclusions

- Recommendation for Microsoft's first movie:
 - Genre and Budget: Animation film with a budget of ~\$87 Million
 - Movie Runtime: ~90-100 Minutes
 - Movie Release: May/June/July
- Project Limitations/Future Improvements
 - Deeper dive including actors, directors, and writers
 - Consider Streaming vs. Theatrical Release
 - Consider newer data to see effects of COVID on movie profits
 - Use existing Microsoft IP for inspiration

"All good ideas start out as bad ideas, that's why it takes too long."

- Steven Spielberg

Thank You!

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