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Computing Vision Business Recommendations

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MAKING AN IMPACT THAT MATTERS
since 1845

Our Team

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Business Goal:

Provide Computing Vision with actionable insights to decide what types of films they should specialize in for their new movie studio

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Data Collection

1 **IMDB**

Database that contains information from the IMDB website, including general movie information. The data contains information about movie genres, directors, production year, runtime, etc.
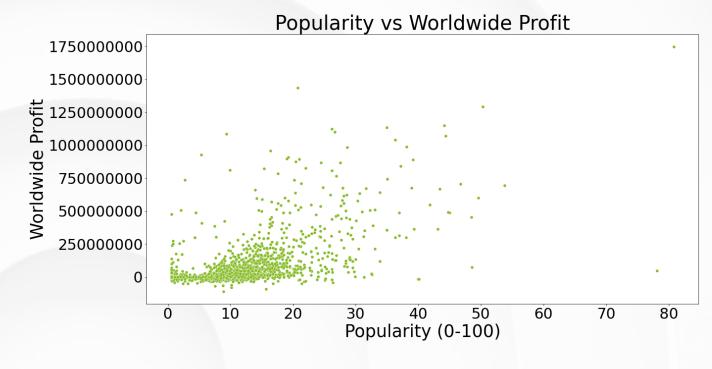
2 **Numbers & TheMovieDB**

Datasets that contain information about movie popularity, movie budget, and total grossing information from themoviedb.org and the-numbers.com.
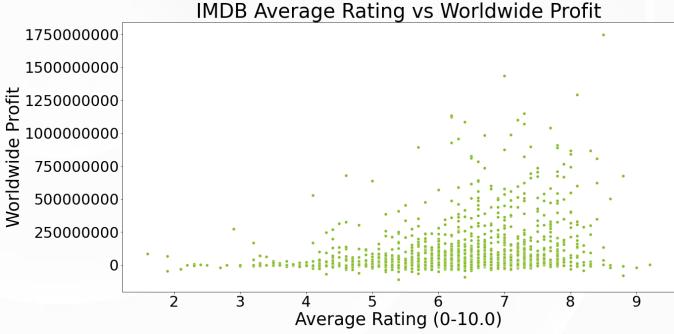
3 **Finalized Data Frame used for Analysis**

Finalized data frame combines the information from these two sources of data, as well as profit calculations.

Why focus on profit

- Calculated by subtracting production budget from gross worldwide revenue

- Profit is positively correlated with both "popularity" (0.60) and "IMDB average rating" (0.25)

- Profit is indicative of both financial measures important to stakeholders and audience popularity

Popularity vs Worldwide Profit

IMDB Average Rating vs Worldwide Profit

Recommendations:
Increase profit through...

1 Genre Prioritization
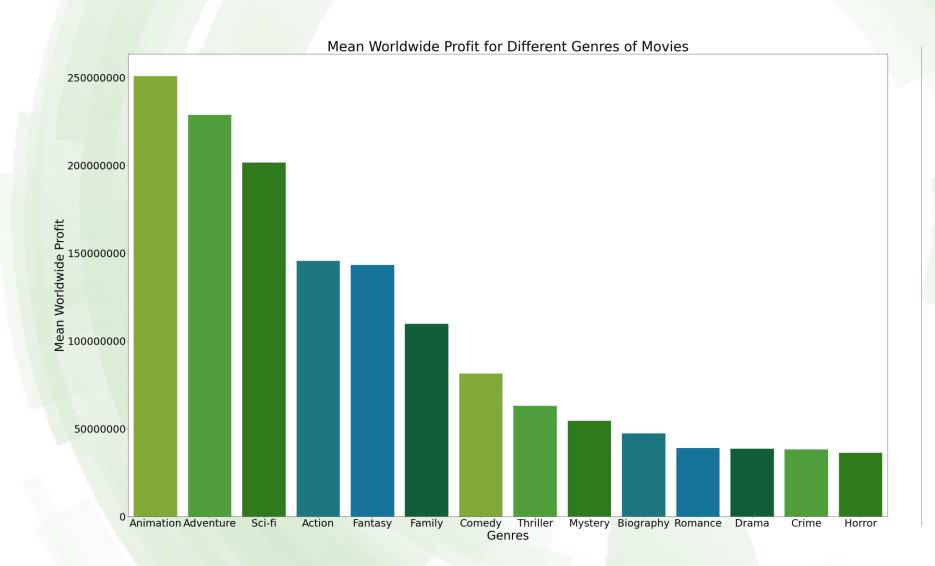
2 Directorship Prioritization

3 Runtime Optimization

Recommendation #1

Genre Prioritization: Animation, Adventure, and Sci-Fi films

Genre Prioritization Analysis: Animation, Adventure, Sci-Fi

Mean Worldwide Profit for Different Genres of Movies

Computing Vision should prioritize Animation, Adventure, and Sci-Fi films

Average Worldwide Profit:

- Animation: $250 million
- Adventure: $229 million
- Sci-fi: $202 million

Average Production Budget:

- Animation: $91 million
- Adventure: $98 million
- Sci-fi: $76 million

Recommendation #2

Directorship prioritization: Joss Whedon, Anthony Russo, Kyle Balda or another top 8 director depending on movie genre

Directorship Recommendations Based on Genre

BRAD BIRD: ANIMATION

- Brad Bird has produced the highest profit, on average, for animation films
- Followed by Kyle Balda and Andrew Stanton

Director	Average Profit
Brad Bird	$1.24 billion
Kyle Balda	$1.10 billion
Andrew Stanton	$1.02 billion

COLIN TREVORROW: ADVENTURE

- Colin Trevorrow produced the highest profit, on average, for adventure films
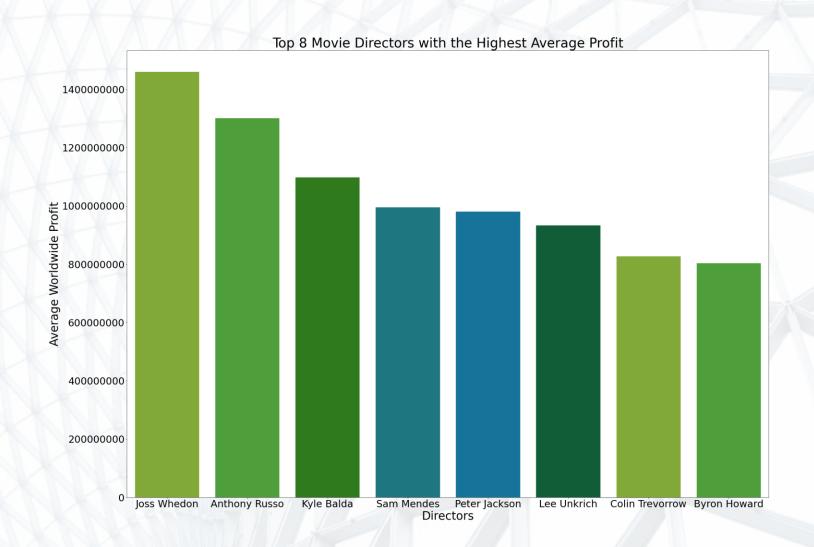- Followed by Joss Whedon and Ryan Coogler

Director	Average Profit
Colin Trevorrow	$1.65 billion
Joss Whedon	$1.46 billion
Ryan Coogler	$1.35 billion

COLIN TREVORROW: SCI-FI

- Colin Trevorrow also produced the highest profit, on average, for Sci-Fi films
- Also followed by Joss Whedon and Ryan Coogler

Director	Average Profit
Colin Trevorrow	$1.65 billion
Joss Whedon	$1.46 billion
Ryan Coogler	$1.35 billion

Directorship Prioritization: Joss Whedon, Anthony Russo, Kyle Balda

Top 8 Movie Directors with the Highest Average Profit

Top 8 directors (produced 5+ movies) that have the highest average gross profit across movies they directed

Doesn't take genre into account

Top 3 Directors:

- Joss Whedon
  $1.46 billion

- Anthony Russo
  $1.30 billion

- Kyle Balda
  $1.10 billion

Recommendation #3

Runtime Optimization:

Between 140 and 180 minutes

Runtime Optimization: Between 140 and 180 minutes (approximately)

OPTIMAL RANGE

Narrowed runtime values to:

- Values within each standard deviation, starting with 68% of the dataset along the average runtime
- Includes data across all genres

TESTING SIGNIFICANCE

Results:

- Proved to be significant
- Range of **runtimes impacts profit** worldwide

IMPACT

Other runtime ranges:

- Tested and compared worldwide profit on average for each range of runtimes

Runtime of 140 to 180 minutes is proven to be most profitable on average

Conclusion

Increase Profitability:
Specialize using 3 recommendations

Runtime Optimization:
Between 140 - 180 minutes

Directorship Prioritization:
Movies directed by one of the top directors within your desired genre

Genre Prioritization:
Animation, Adventure, Sci-Fi

Questions?