Microsoft Movie Studios (EDA)

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Background

Microsoft wants to enter the movie industry by creating a new movie studio. To achieve this, we need to understand the types of films that are currently successful at the box office and translate those findings into actionable insights using data available online. The goal is to identify the most lucrative film genres and themes to maximize the success of the new movie studio.
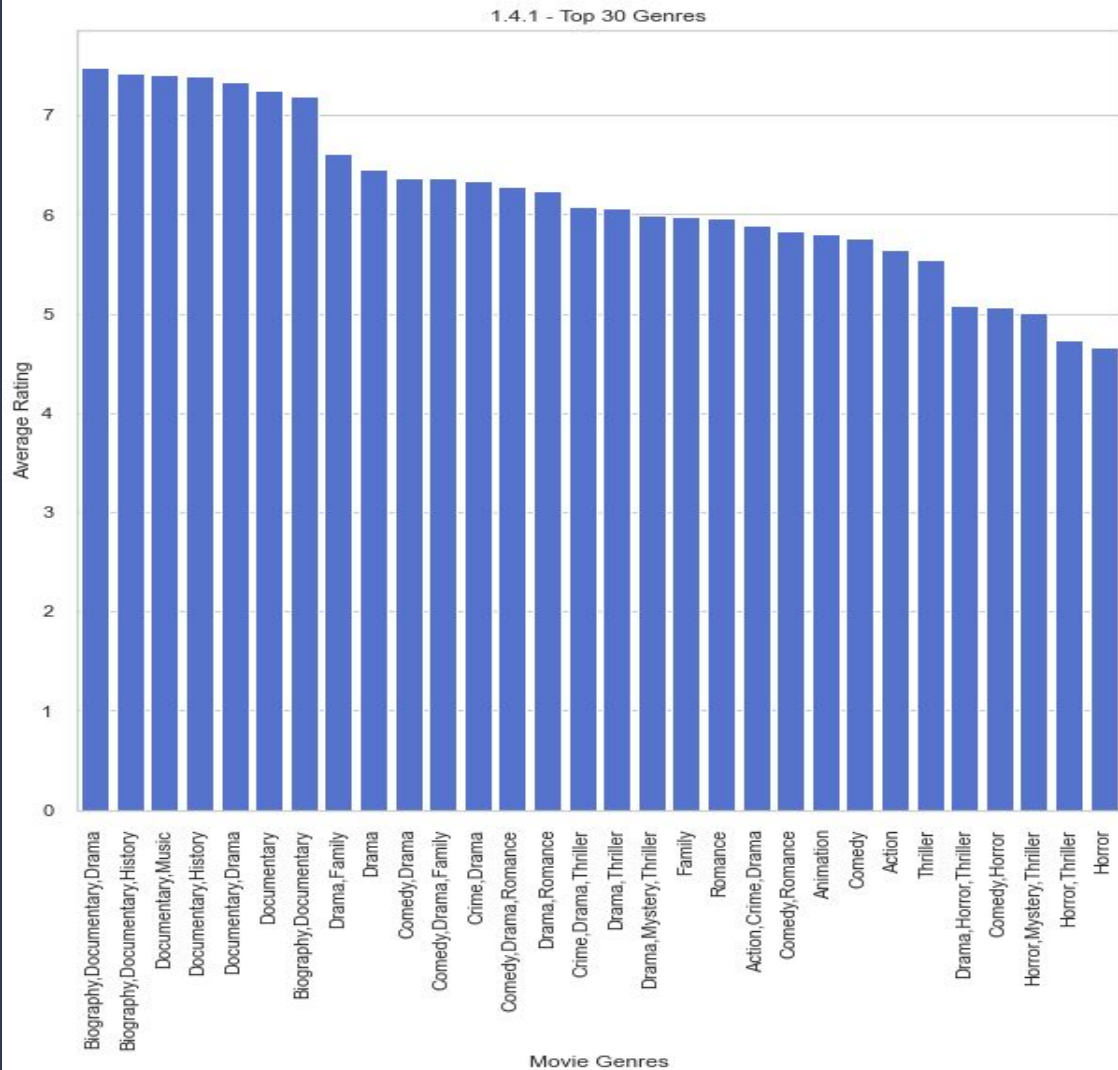
Data Understanding

The data sources for this analysis will be pulled from;

1. A database, im.db, that is formatted in a database format with eight tables sourced from https://www.imdb.com/.
2. A csv file, tn.movie_budgets.csv, that has comma separated values and is sourced from https://www.the-numbers.com/.
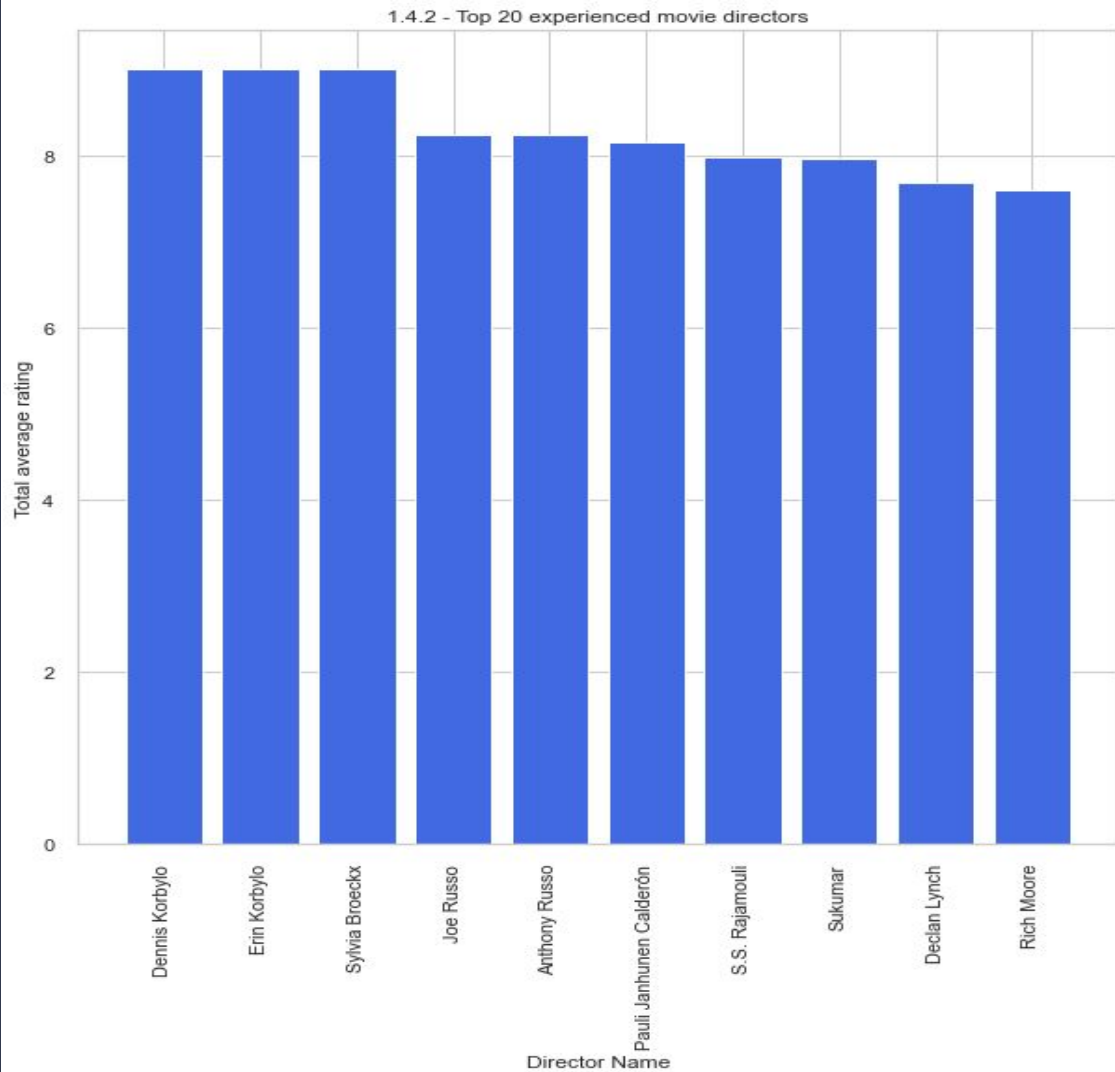
Types of films that are currently successful

This study selected the top 30 genres and combined genres vs the average rating that put the combination of biography,documentary and drama ahead with horror taking the final place.
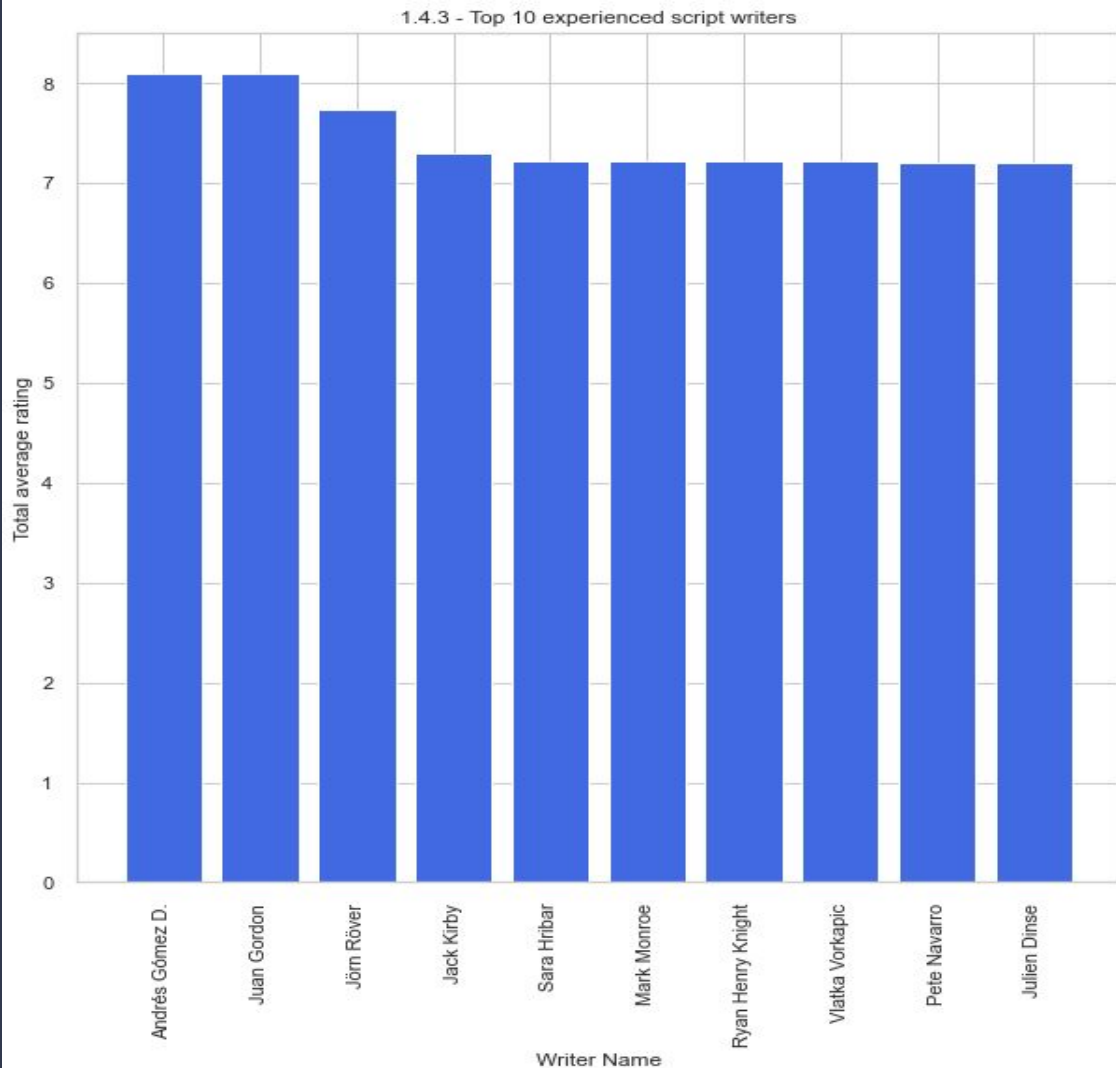

1.4.1 - Top 30 Genres

Movie Directors' analysis

These are the top 10 directors who have directed over 20 movies and have an average rating of more than 7 out of 10 in all those movies.
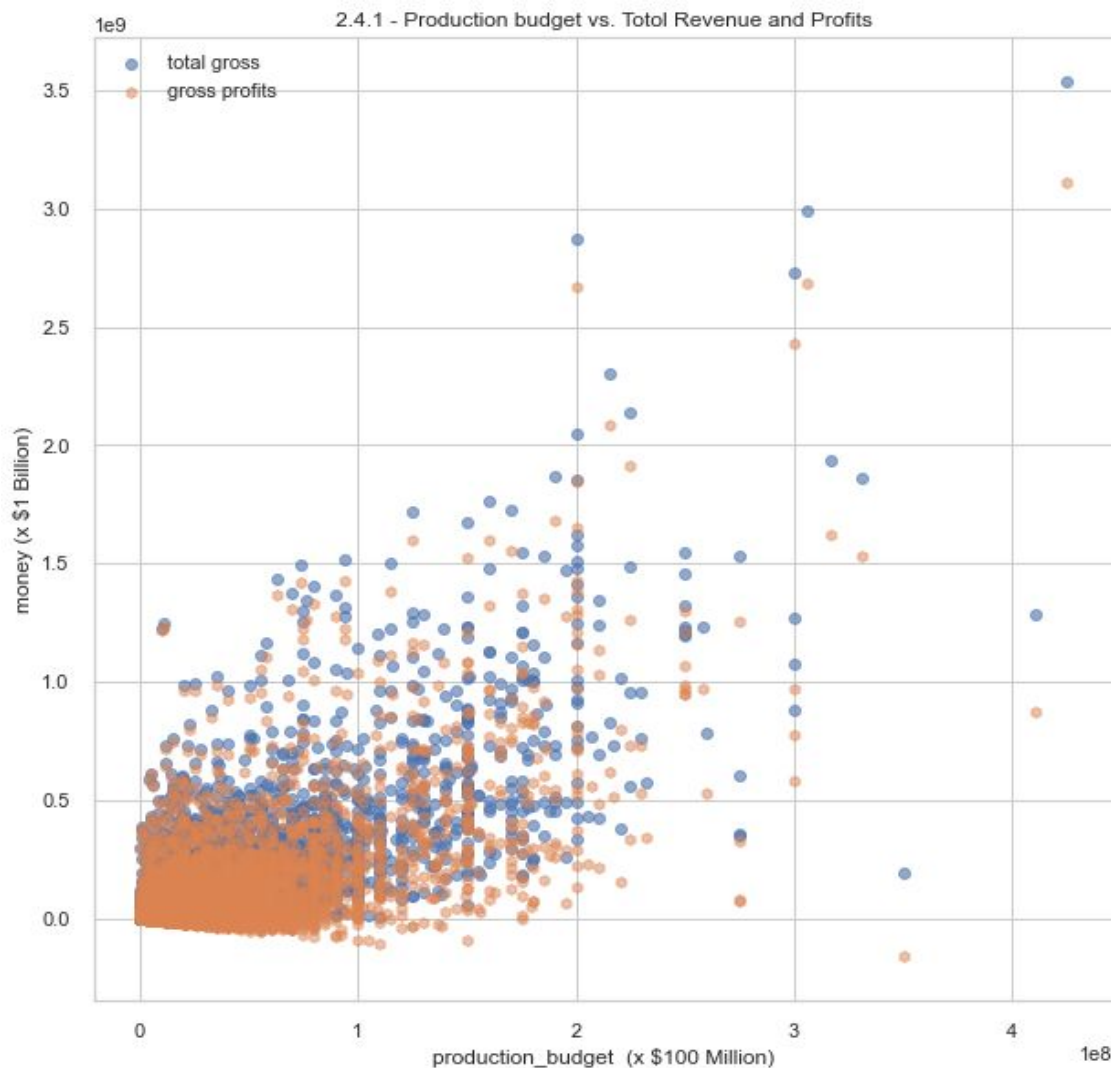

1.4.2 - Top 20 experienced movie directors

Movie Writers' Analysis

These are the top 10 writers who have had their work made into highly rated movies more than 20 times in their carriers.

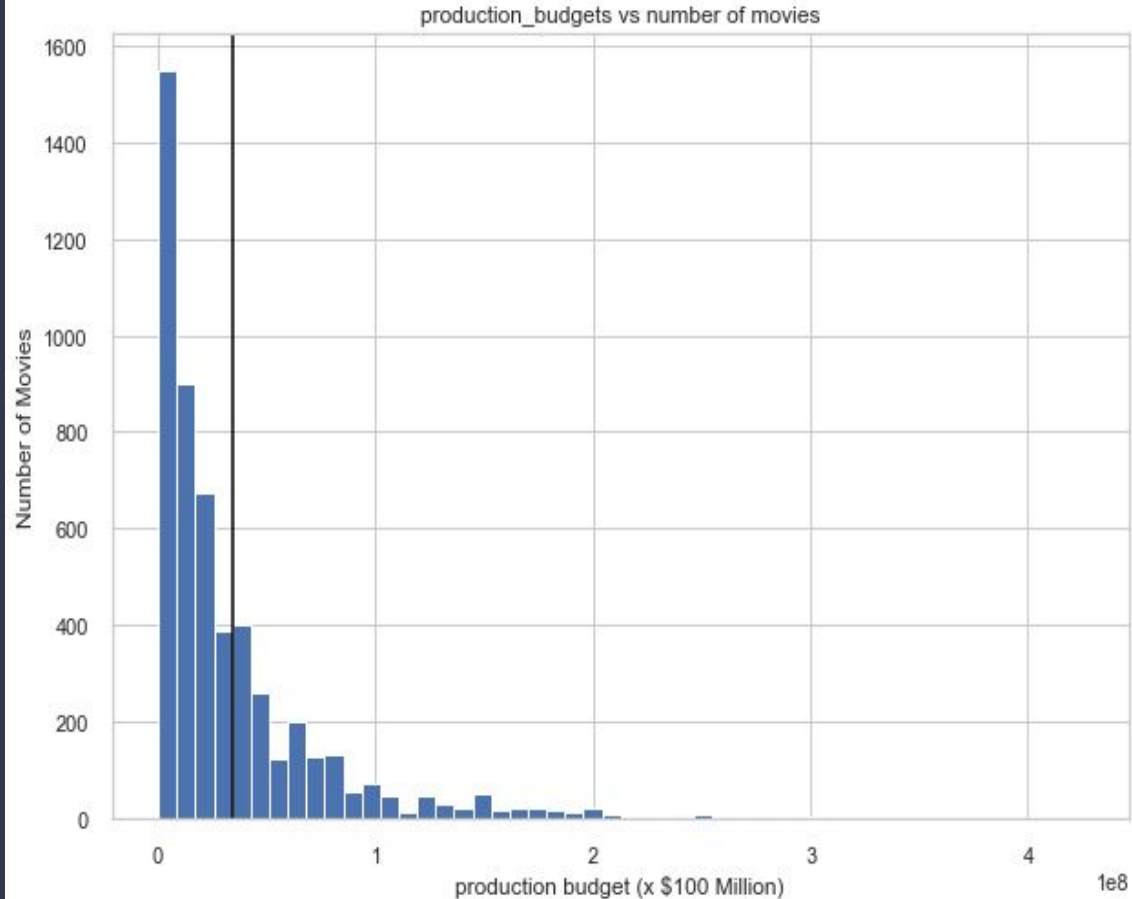1.4.3 - Top 10 experienced script writers

Production Budget Analysis

The scatter plot shows the strong positive correlation between the production budget and both the total profit and total gross revenue.
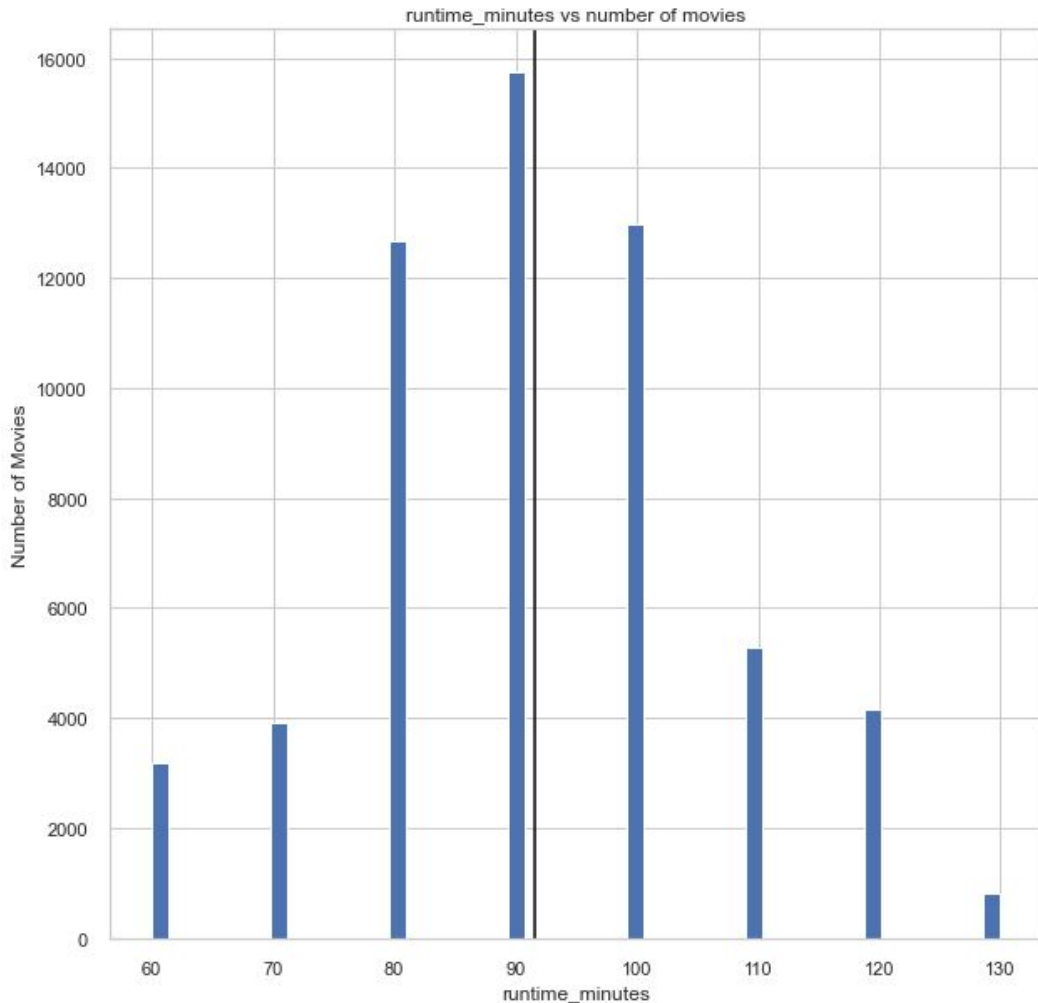
Optimal Budget Analysis

The barplot shows the mean production budget value which is skewed the left indicating that most movies were made with small budgets as compared to the mean indicated by the black line.

production_budgets vs number of movies

Runtime Analysis

The bar plot shows that most movies were made around the 90 minute mark with the black line being the mean at 94 minutes.

runtime_minutes vs number of movies

Recommendations

1. The company should consider the top 30 genres and genre combinations as a good place to start as they have a good average rating and are more likely to succeed.
2. The company should hire the directors who have higher skill and experience level as they have the technical know how to creating high rating films.
3. Writers with more experience and a higher rating should also be considered as their performance trend will continue.
4. Although the mean budget is around $34 million the company should invest a lot more so that they may get better returns.
5. They should keep their films within 90 minutes which seems like an industry optimum length and not risk creating too long or too short films that would impact their success.

Thank You

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