

Microsoft Movie Analysis

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Business Problem

Microsoft aims to enter the original video content market and establish a new movie studio. With limited expertise in filmmaking, the company seeks to identify the most successful movie genres at the box office. Our task is to analyze current industry trends and provide actionable insights to guide Microsoft's strategic decisions in selecting film genres for their new studio.



Data Understanding

Research Questions:

- what are the most popular movie genres?
- what is the average runtime minutes of a movie?
- what is the average domestic gross for a standard movie?
- what is the relationship between domestic gross profit and production budget?

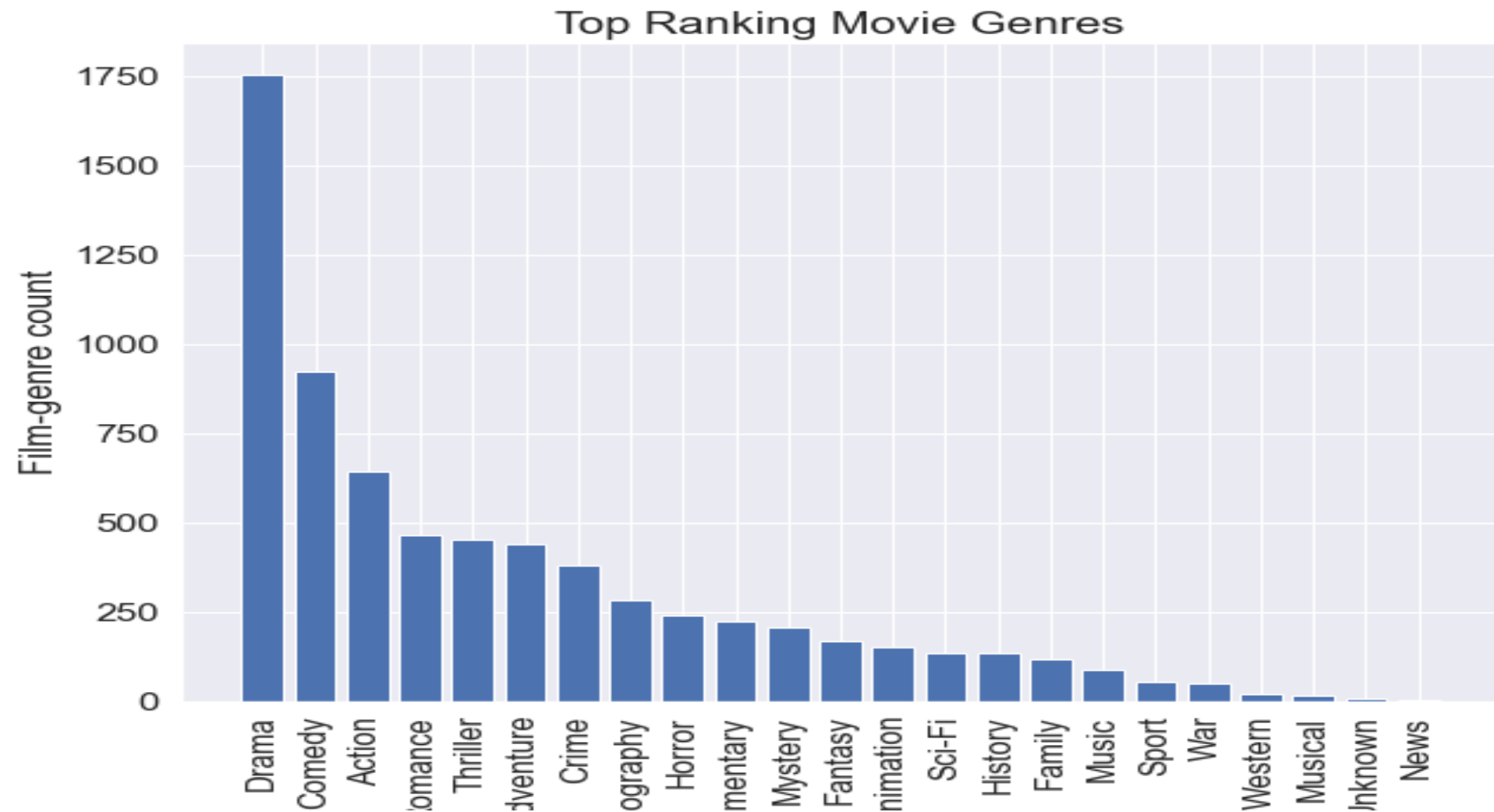




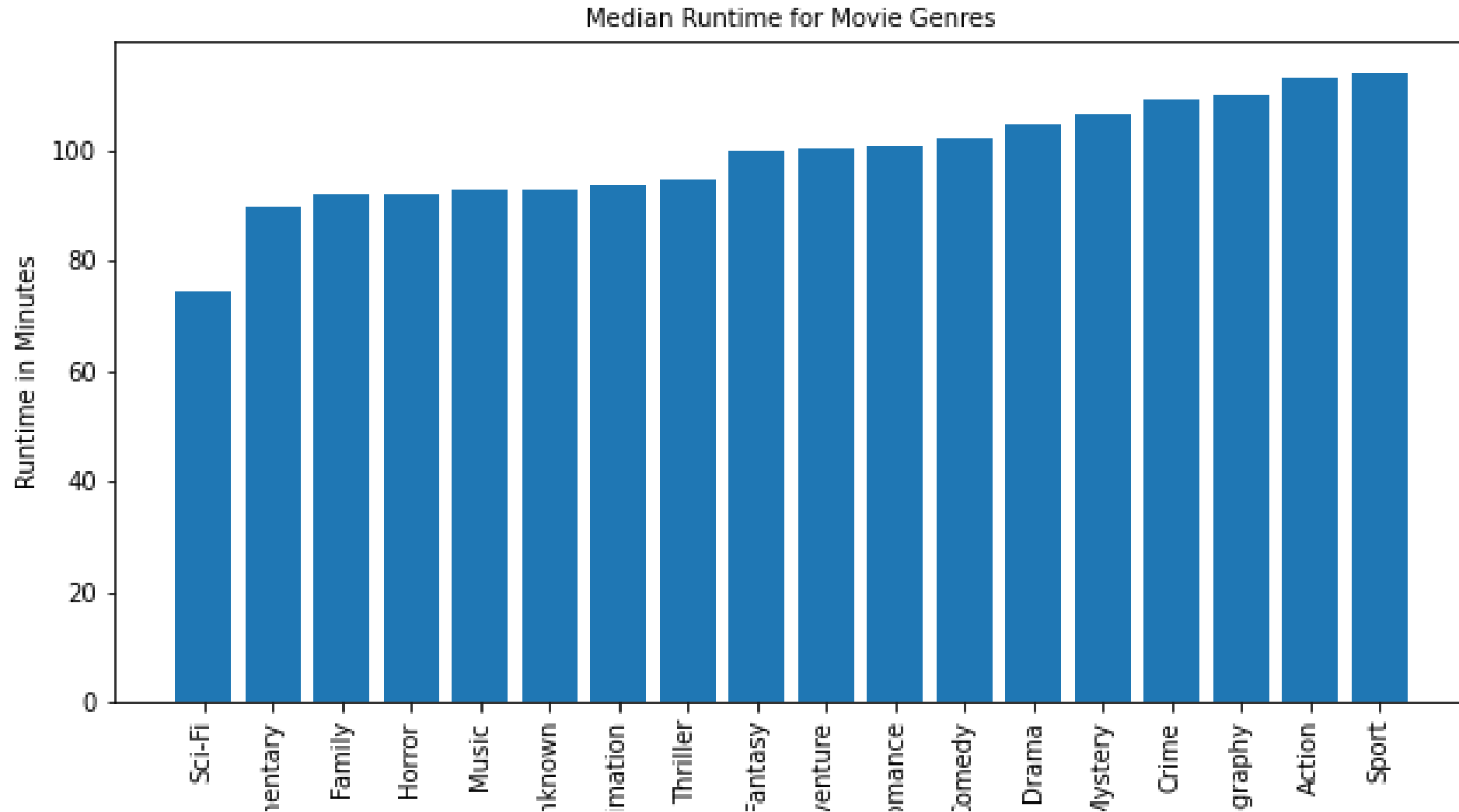
Data Cleaning & Preparation

- Identified data quality issues: missing values, duplicates, incorrect data types, and outliers.
- Utilized IMDB datasets: merged movie_basics and movie_ratings, dropped duplicate titles, handled missing values in runtime_minutes column by replacing them with the mean.
- Converted data types in bom_movies dataset: changed domestic_gross from float to integer to avoid precision issues.
- Cleaned tnovies_budget dataset: converted production_budget, domestic_gross, and worldwide_gross from string to float, then to integer, and removed the dollar sign using Stackoverflow.
- Merged cleaned datasets: combined movies_imdb with bom_movies to address research questions.
- Analyzed correlation: used tnovies_budget dataset to explore the relationship between production budget and domestic gross.

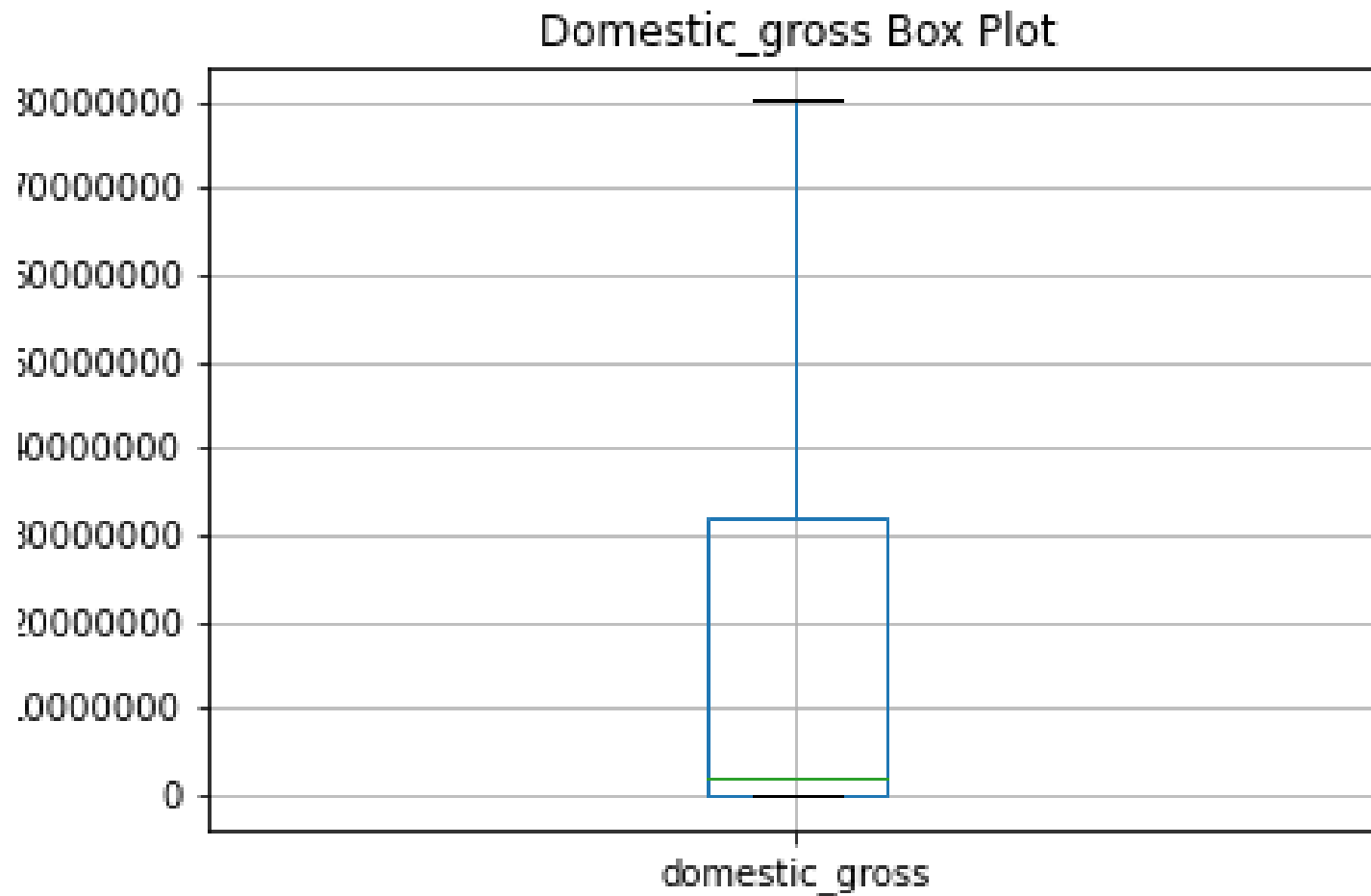
Data Analysis



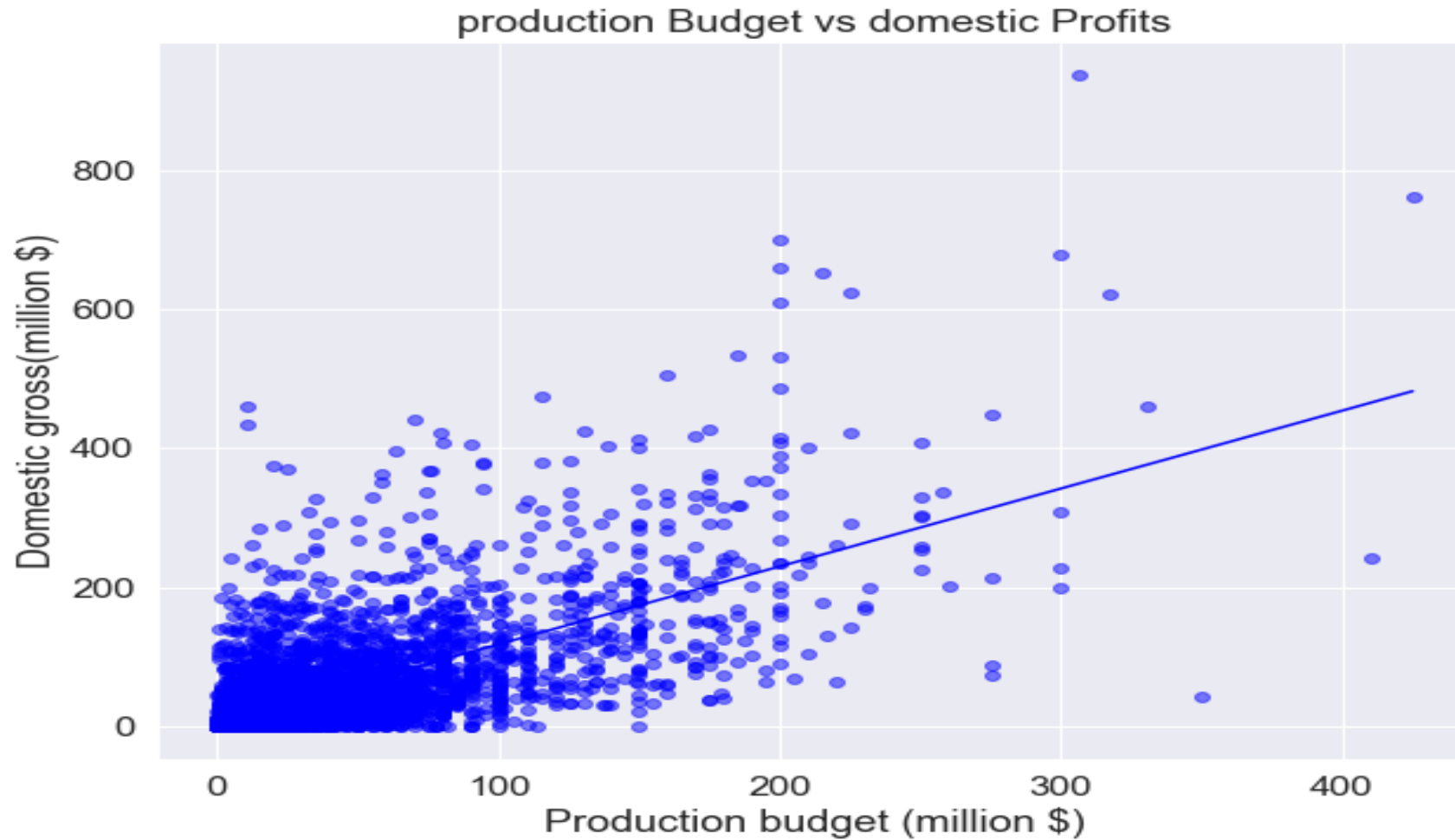
Data Analysis



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Conclusion

From the finding in movie analysis achieved from the 2010 to 2018 data it is clear that genre of the movie plays a great role in the success of a movie. drama and comedy are the leading genres in preference and revenue generation. the average runtime for a movie is 107 minutes but the length is not a direct predictor of success. However, the relationship between production budget and gross brings better return in profits.

Recommendation

- While Drama and Comedy have demonstrated robust performance, maintaining a diverse range of movie genres is essential to cater to varying audience preferences and minimize risks. When it comes to budget allocation, it's crucial to allocate resources wisely, prioritizing areas such as story quality, casting, and post-production. Although a higher budget often correlates with greater returns, it's imperative to ensure that funds are utilized effectively to maximize impact.
- To gain deeper insights into underperforming genres like romance, mystery, and music, conducting comprehensive market research is essential. Understanding the reasons behind their lackluster revenue generation can inform strategic decisions for future projects and help tailor content to better meet audience expectations.
- Additionally, given that movie runtime alone does not determine financial success, strategic marketing initiatives can significantly influence a movie's performance. By implementing effective marketing strategies, filmmakers can enhance visibility, attract audiences, and ultimately contribute to the success of their projects.