

What Makes a Movie Profitable? Analysis of Movie Returns and Associated Factors



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Business Understanding

- ▶ Microsoft Corporation wants to diversify its business
- ▶ Product diversification into movie industry can enable Microsoft reduce dependence on a single industry and tap into new markets
- ▶ Diversifying to create original video content can help Microsoft expand their brand presence and reach a wider audience
- ▶ Diversification should be approached strategically and based on evidence from market research for successful expansion

Business Problem

- ▶ The movie industry is profitable as evidence from box office revenues
- ▶ However, success is not guaranteed as the returns are determined by a number of risk factors.
- ▶ There is a need to understand factors that influence profitability in order to make informed investment decisions

Objectives

► Main Objective

- I. To determine factors that influence profitability of movie genres.

► Specific Objectives

- I. What are the top produced genres of movies?
- II. Do average rating, runtimes, budget and production budget influence profitability of movies?
- III. What genres should the company consider investing in?

Data Understanding

- ▶ Data sourced from the Box Office Mojo and IMDB.
- ▶ Genres: Category of artistic composition, characterized by similarities in form, style, or subject matter for a piece of content.
- ▶ Production budget: The production cost of a movie.
- ▶ Worldwide gross: Box office revenues from all countries the movie sold.
- ▶ Profit: Computed as worldwide gross less production budget

Data Cleaning

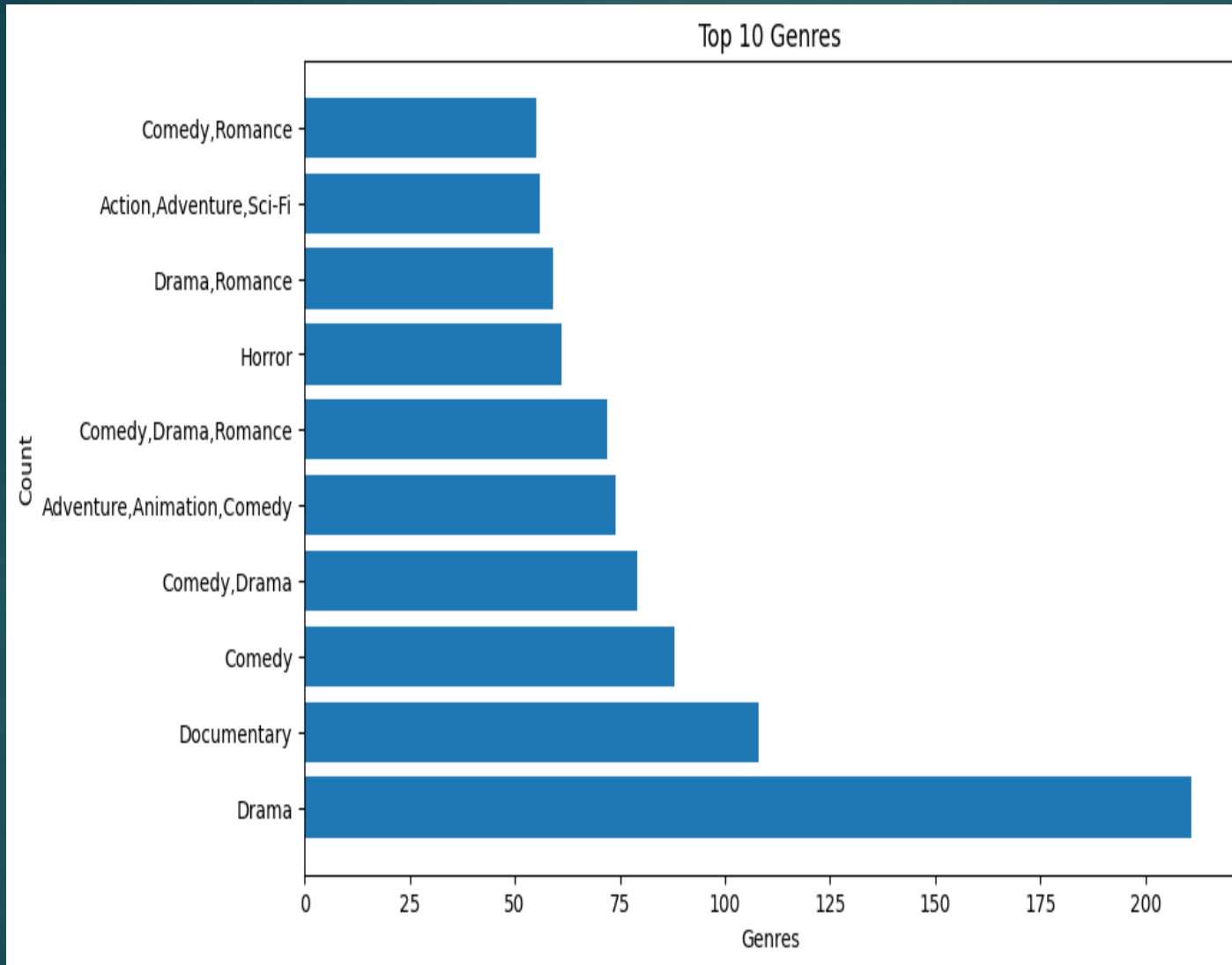
- ▶ Dropped irrelevant columns
- ▶ Converted production budget and worldwide gross to float
- ▶ Dropped missing values
- ▶ Checked for duplicates and anomalies
- ▶ Focused only on productions budgets and a worldwide gross of more than \$10million.
- ▶ Focused on movies with a rating of five and above

Data Analysis

- ▶ Exploratory data analysis was used
- ▶ Genres ranked by frequency to determine top 10
- ▶ Production budget, worldwide gross, average rating and profit grouped by genres
- ▶ Correlation between production budget, profit, run times in minutes and average rating
- ▶ Bar graph between top 10 genres and average rating, production budget, world wide gross and profit
- ▶ Scatter plot between production budget and profit



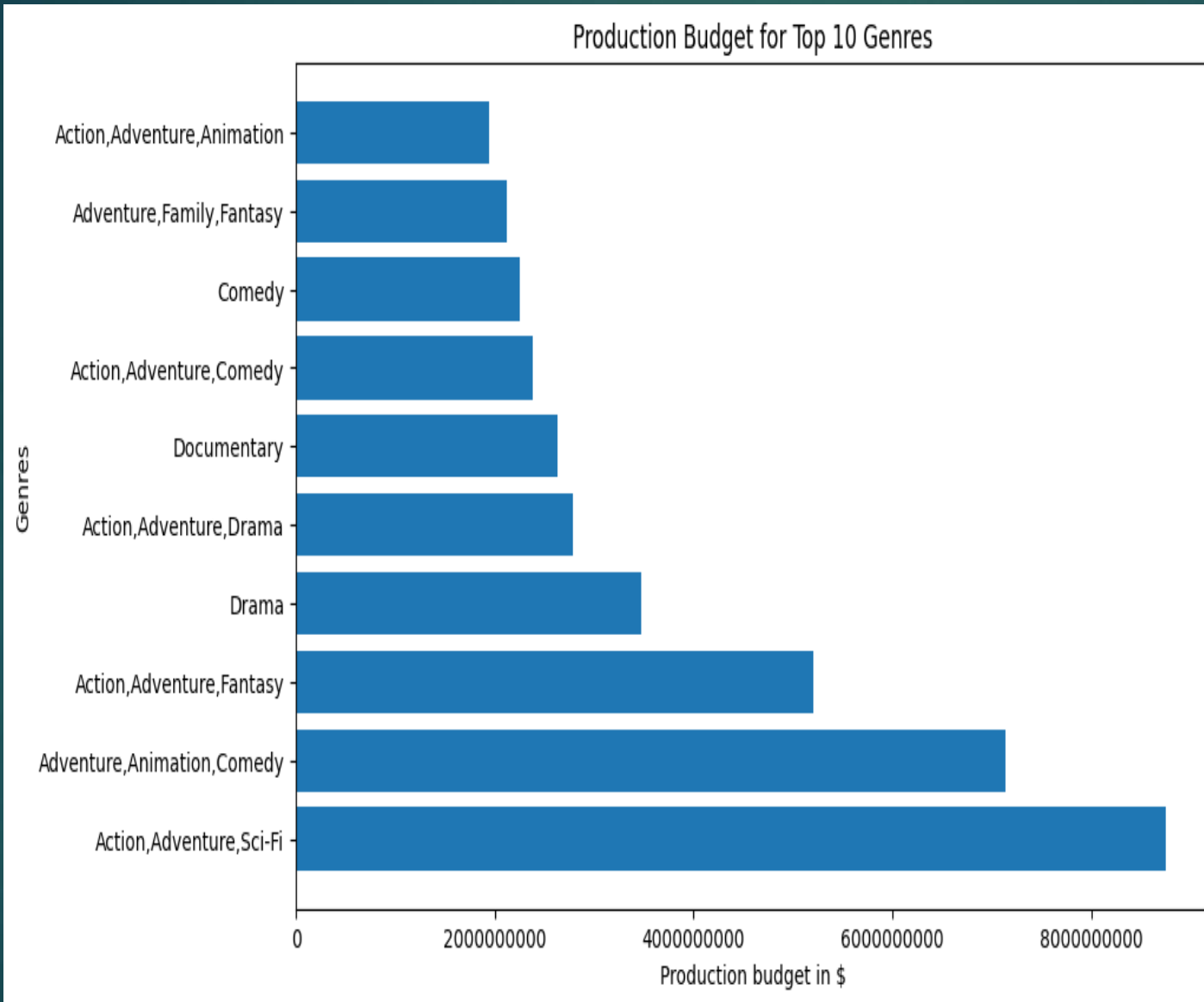
▶ Results



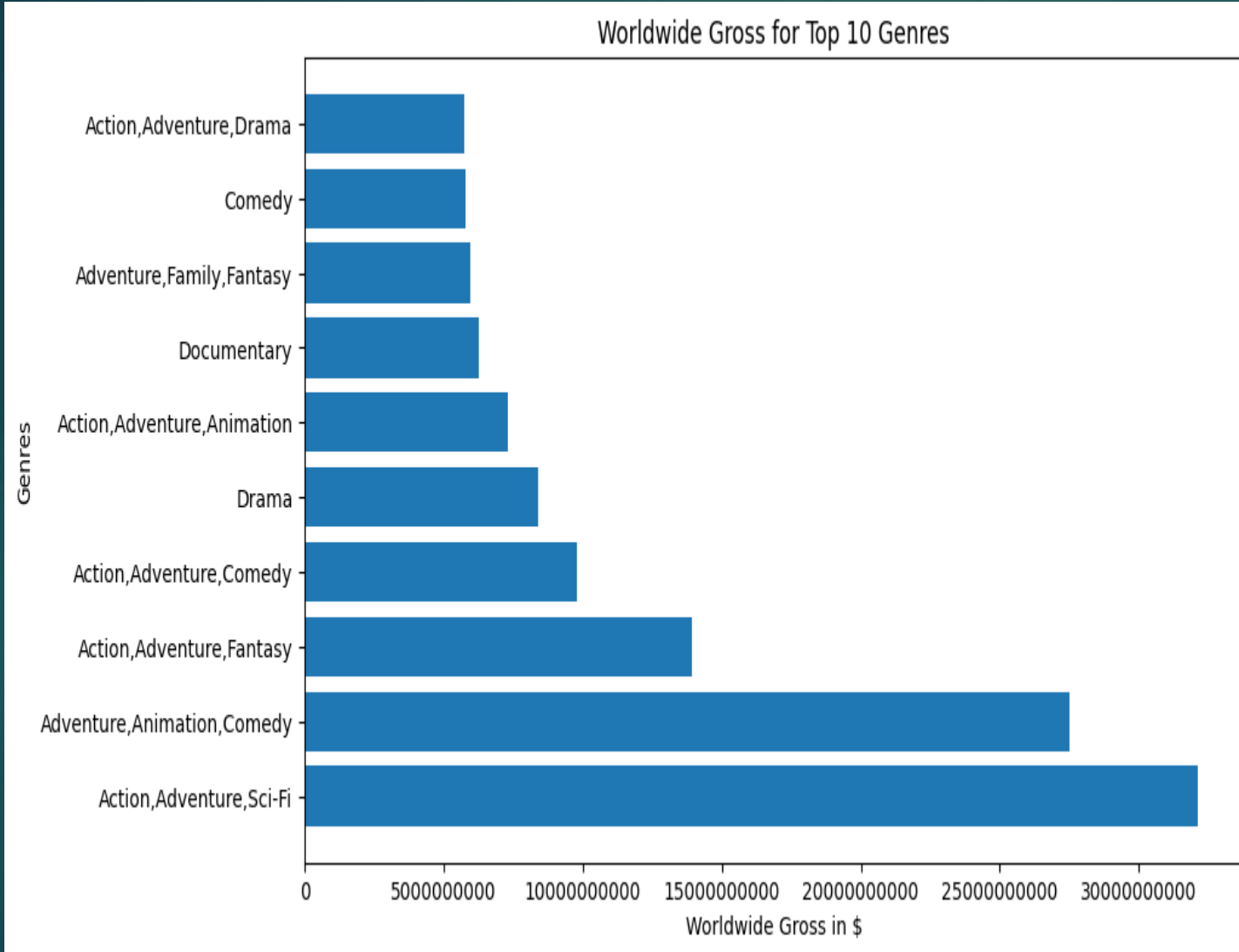
Drama is the **most** common genre with a count of 211.

Documentary and Comedy follow with 108 and 88 counts, respectively.

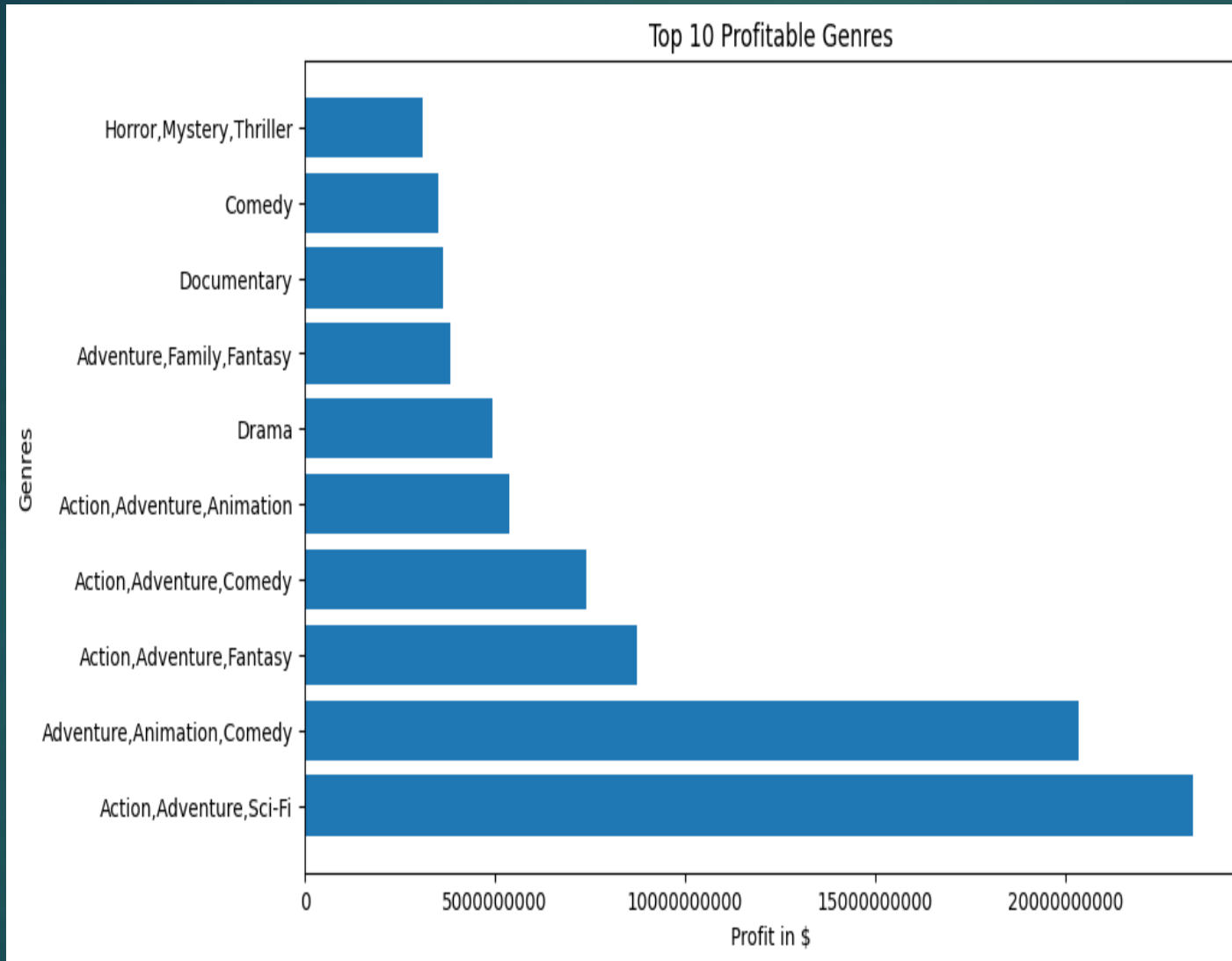
Comedy, adventure, animation, and romance also appear frequently.



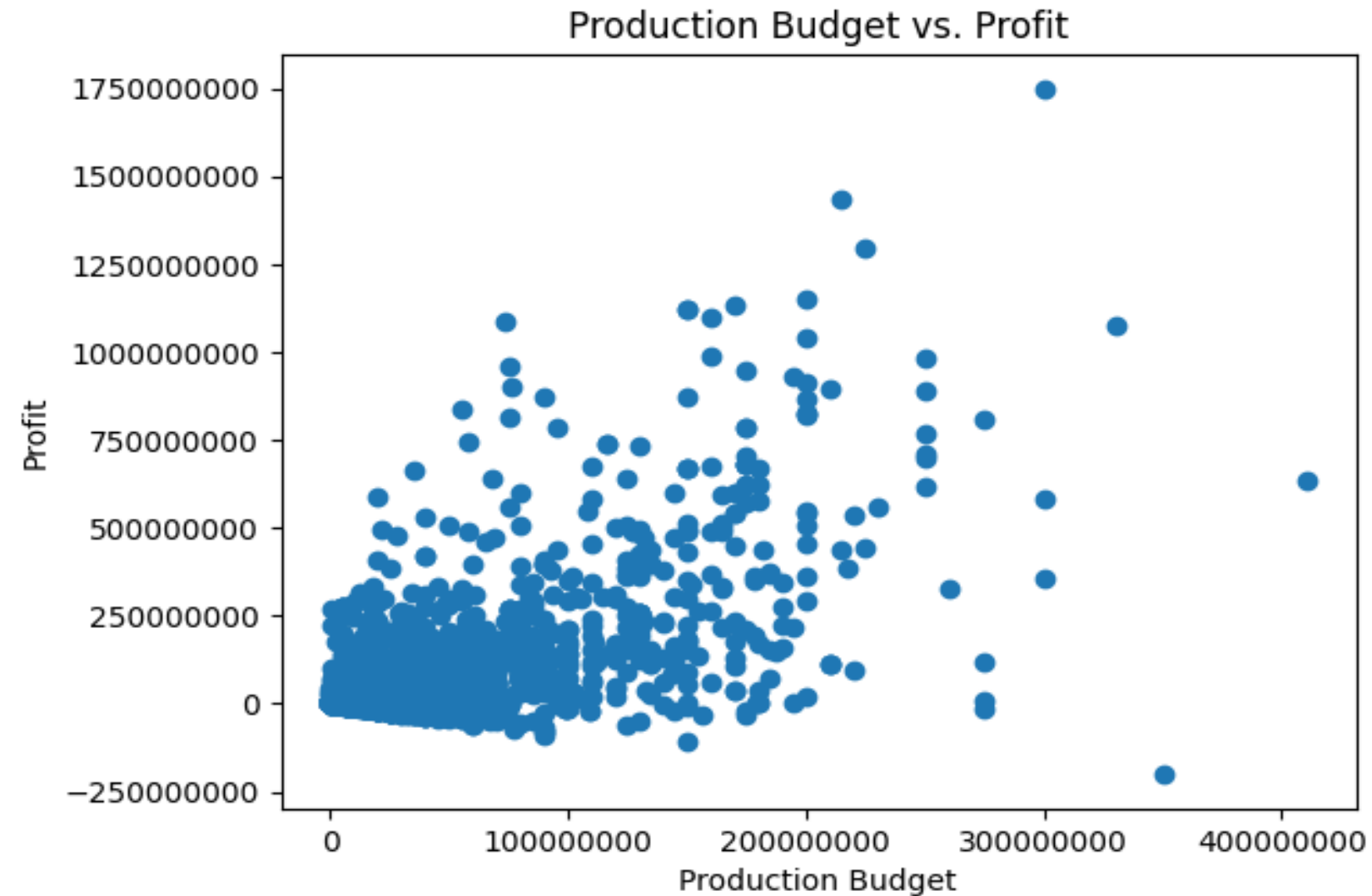
Production
budgets
differ
across
genres



Worldwide gross
differs across
genres.



Similar pattern
with
worldwide
gross where
action,
adventure,
and Sci-Fi
movies
generated
the **highest**
profit.



An increase
in
production
budget is
associated
with an
increase in
profit.

Recommendations

- ▶ While choosing the movie to produce, genre, production budget and profitability should be the main factors followed by average rating.
- ▶ Focus on high-budget genres with strong profitability. Action, adventure, Sci-Fi, adventure, animation, comedy, and action, adventure, fantasy have both high production budgets and significant profits. Investing in these genres can offer potential returns on investment due to their popularity and financial success.

Recommendations

- ▶ Consider genres with high ratings and moderate production budgets. Drama, documentary, and adventure, drama, Sci-Fi receive high ratings and have moderate production budgets. These genres indicate a balance between critical acclaim and financial viability, making them promising investment options.
- ▶ Explore opportunities in popular genres with moderate production budgets: Drama, comedy, and adventure, animation, comedy are popular genres with moderate production budgets. Investing in these genres can tap into widespread audience appeal while managing production costs effectively, potentially leading to profitability.