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Computing Vision's
Movie Studio Analysis

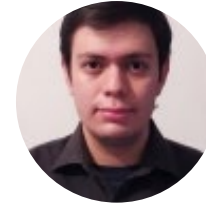March 2023

GIT-ing it Done! Team Members

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Introduction

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Project Overview / Business Understanding

Computing Vision is looking to create a movie studio. Our goal is to help analyze what genre movie would be the most successful. Git-ing it Done formed a few key questions to answer in order to provide the stakeholders our best recommendations.

Key Business Questions

What movies are doing well at the box office by genre and popularity ratings?

What is the relationship between production budgets and income by genre?

What studio or director could Computing Vision work with to increase sales?

Is there a benefit to producing a film domestic vs foreign?

Stakeholders

Computing Vision

Customers

Directors

Marketing Team

Our recommendations will be based on data analysis in order to answer these business questions while considering stakeholders' input

What we heard from Stakeholders:

"We want to know what other studios are doing that is working well—who is making the most money and how"

"Money is important, but we want to be competitive in the long run—which directors and genres are popular and continuously at the top of the box office?"

"Computing Vision is new to the movie studio space; we have the relevant data but are counting on you to extract what is absolutely necessary to find where there is an opening in the market for us to grow and compete with the other big companies"

Data Analysis

Data Understanding
The data sources are we using for analysis and to make our recommendation
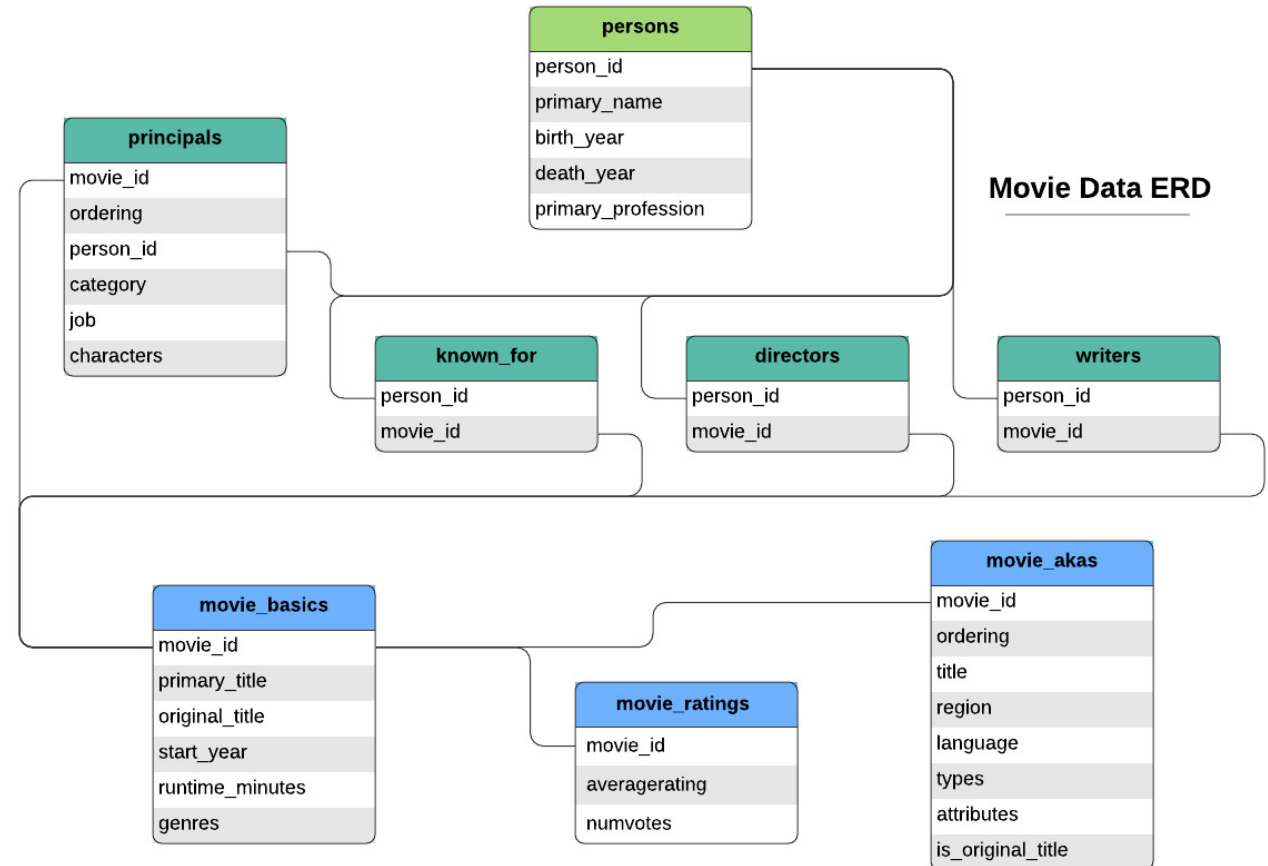
Main Sources of Data

- **IMDB**
  - Relational Database
  - Mainly utilized the movie_basics and movie_ratings tables

- **Box Office Mojo**
  - CSV file containing information on gross income by movie title

- **The Numbers**
  - CSV containing budget and profit data by movie title

Movie Data ERD

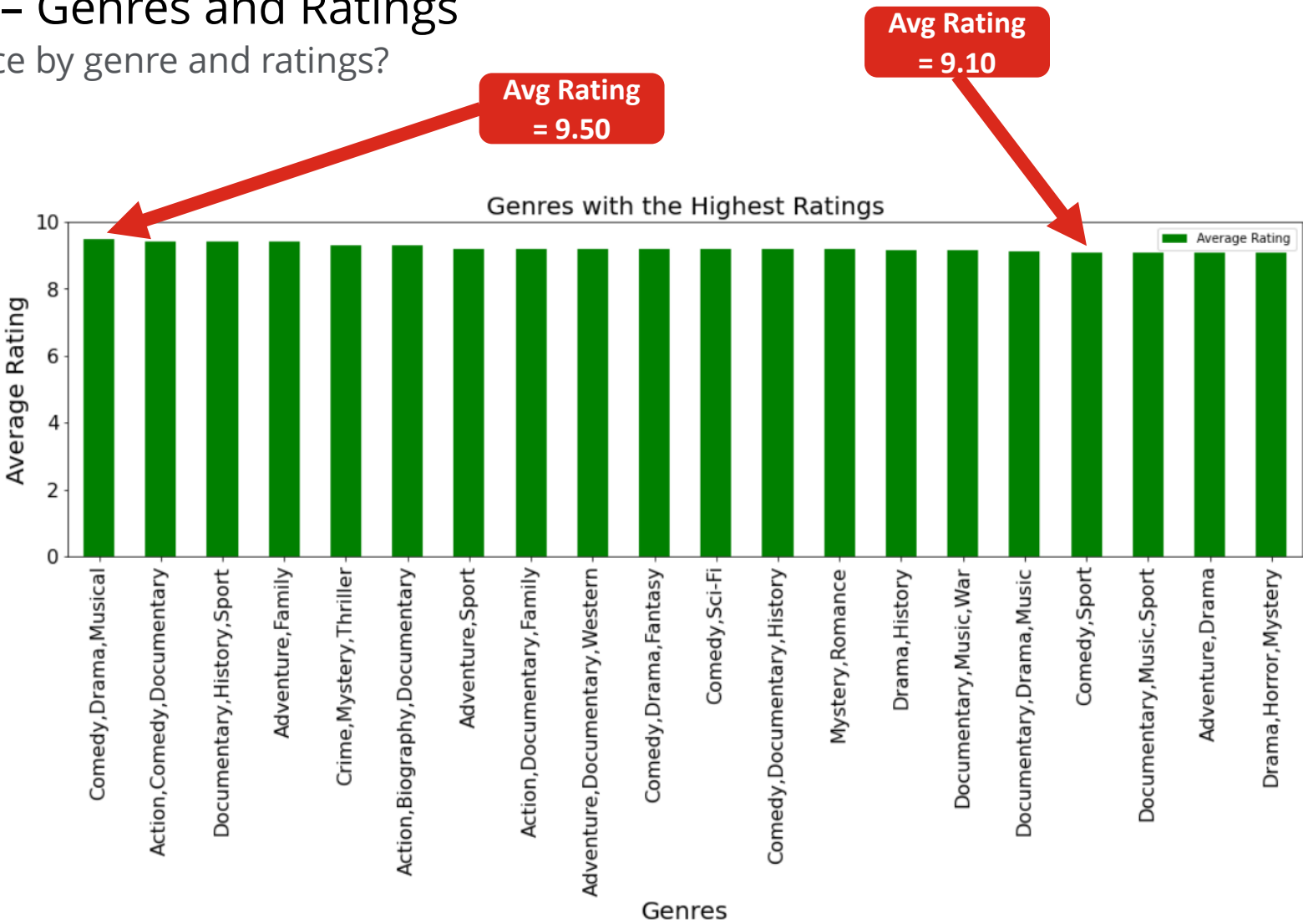# Data Analysis and Visualizations – Genres and Ratings

What movies are doing well at the box office by genre and ratings?

Highest Rating

- Comedy/Drama/Musical
- Action/Comedy/Documentary
- Documentary/History/Sport

Lowest Ratings

- Drama/Family
- Adventure/Biography/Comedy
- Adventure/Animation/Family

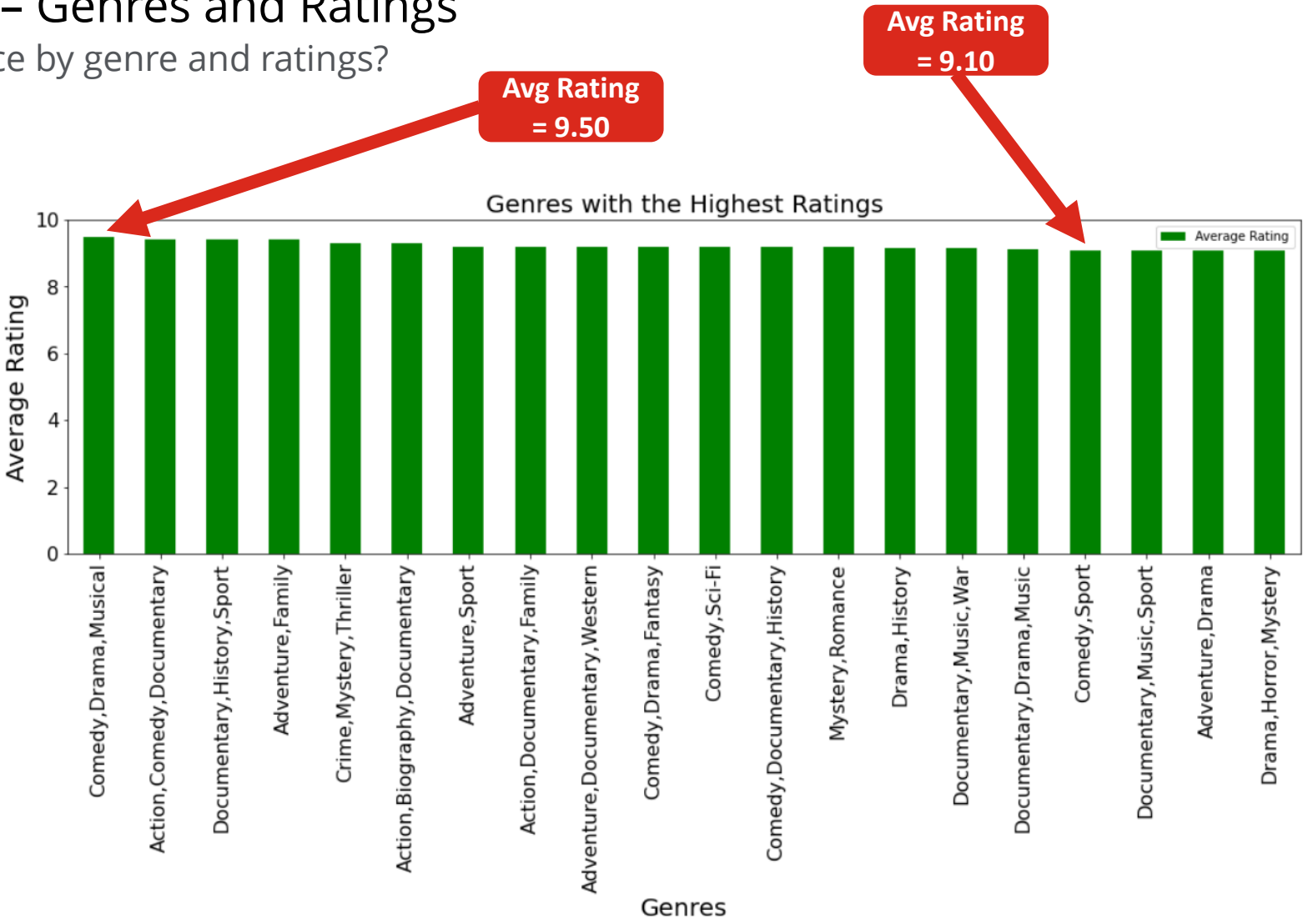**Avg Rating = 9.50**

Avg Rating = 9.10

Data Analysis and Visualizations – Genres and Ratings
What movies are doing well at the box office by genre and ratings?

Summary – Key Takeaways

- Comedy/Drama/Musical proved to have higher ratings from viewers
- Avoid Drama/Family films as they proved lower ratings

Avg Rating = 9.50

Avg Rating = 9.10

Genres with the Highest Ratings

Data Analysis and Visualizations – Total Gross

What movies have the highest total gross profit (total domestic and international profits)?
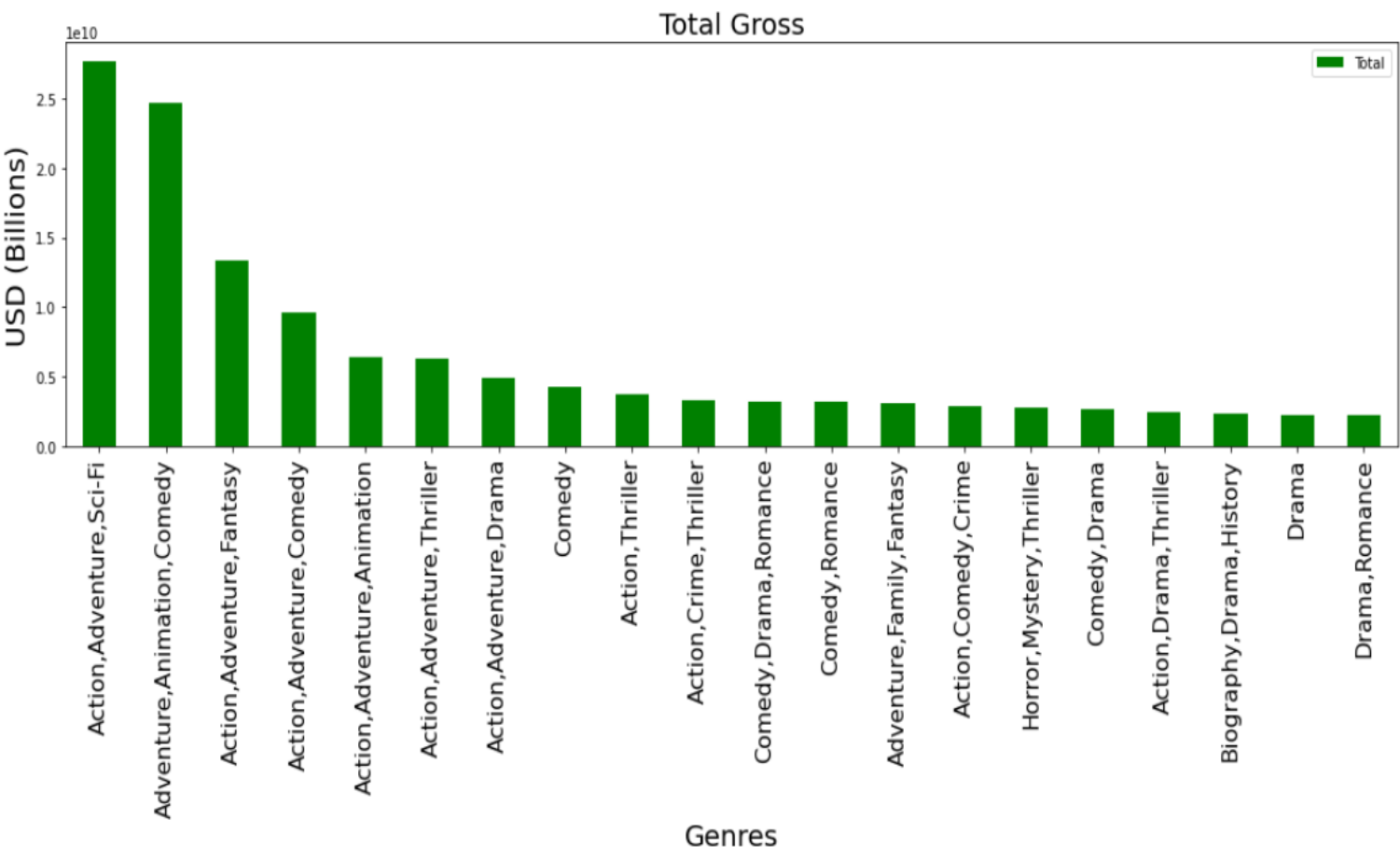
Highest Gross

- Action/Adventure/Sci-Fi
- Action/Animation/Comedy
- Action/Adventure/Fantasy

Lowest Gross

- Biography/Documentary/Drama
- Biography/Documentary/History
- Biography/Documentary

Summary – Key Takeaways
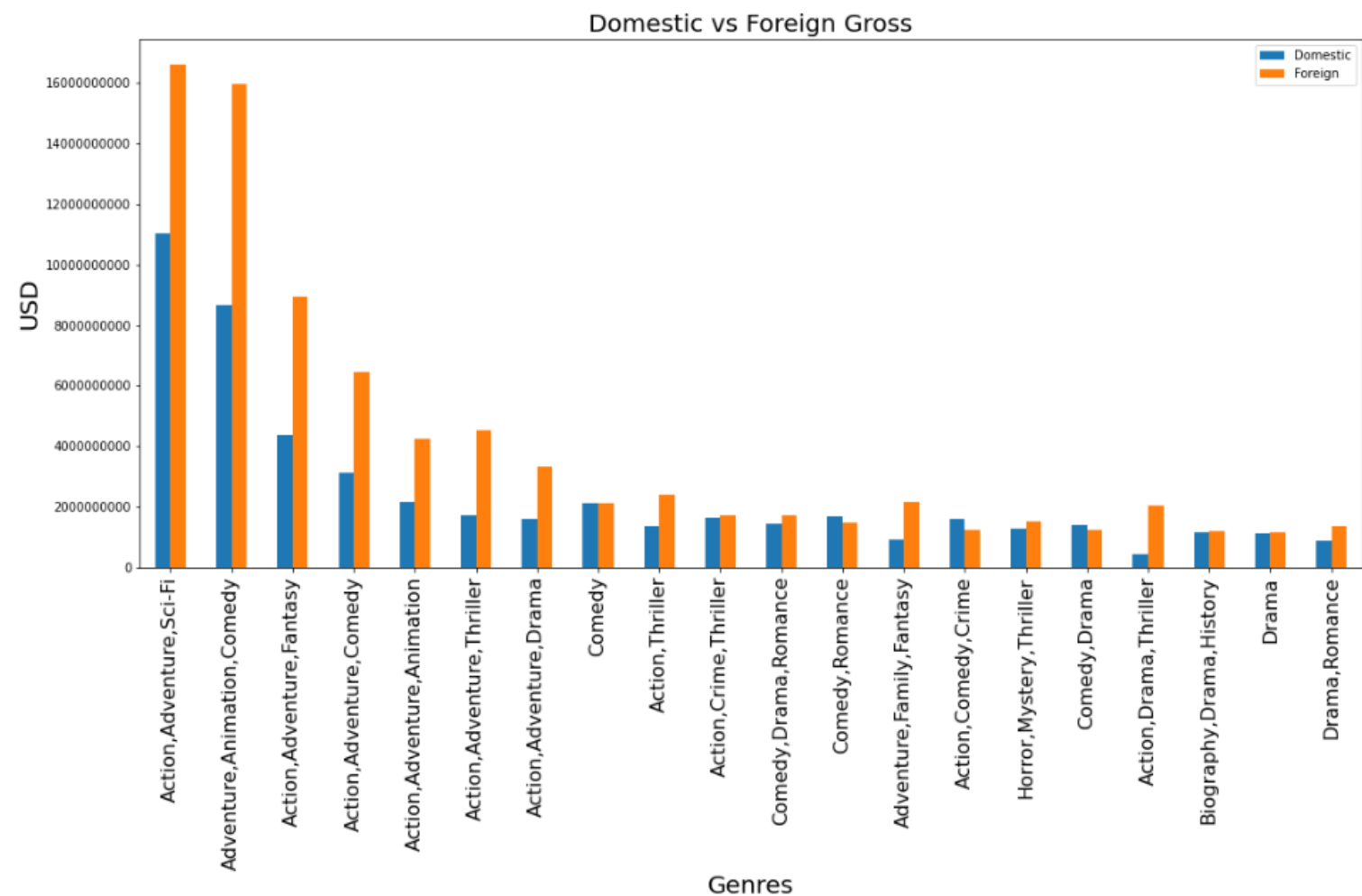
- Crossover in genre with popularity
- Action/Comedy

Data Analysis and Visualizations – Foreign and Domestic

Should Computing Vision release movies domestically or internationally?

Summary – Key Takeaways

- Foreign Gross 17B – 11B
- Foreign Gross 2/3rd of income
- International Launch

Domestic vs Foreign Gross

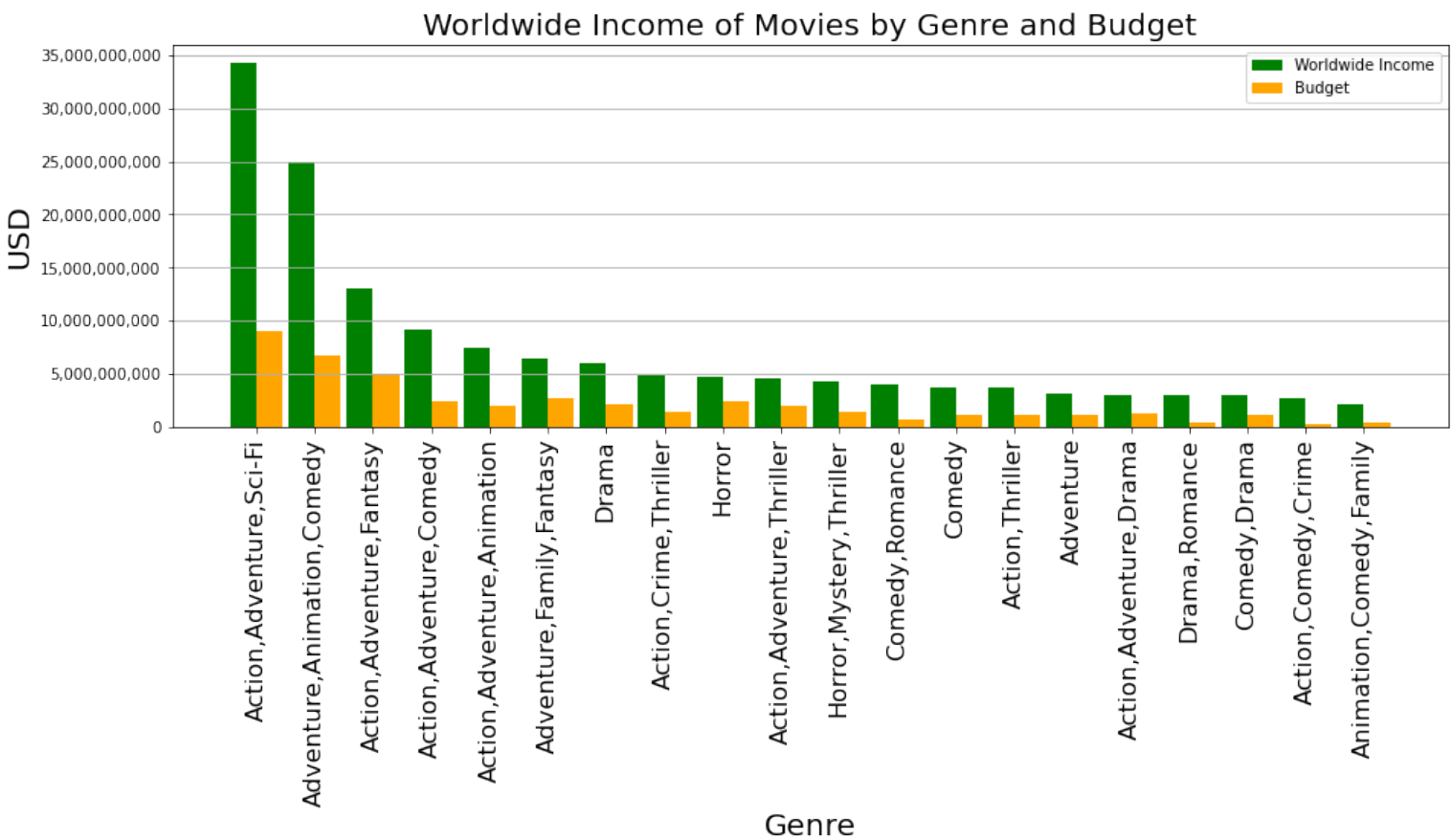# Data Analysis and Visualizations – Budgets and Income

How is the movies income base on the genre in comparison to their production budget?

Highest Profit

- Action/Adventure/Sci-Fi

- Action/Animation/Comedy

- Action/Adventure/Fantasy

Lowest Profit

- Biography/Drama/Mystery

- Documentary/Family

- Adventure/Drama/History

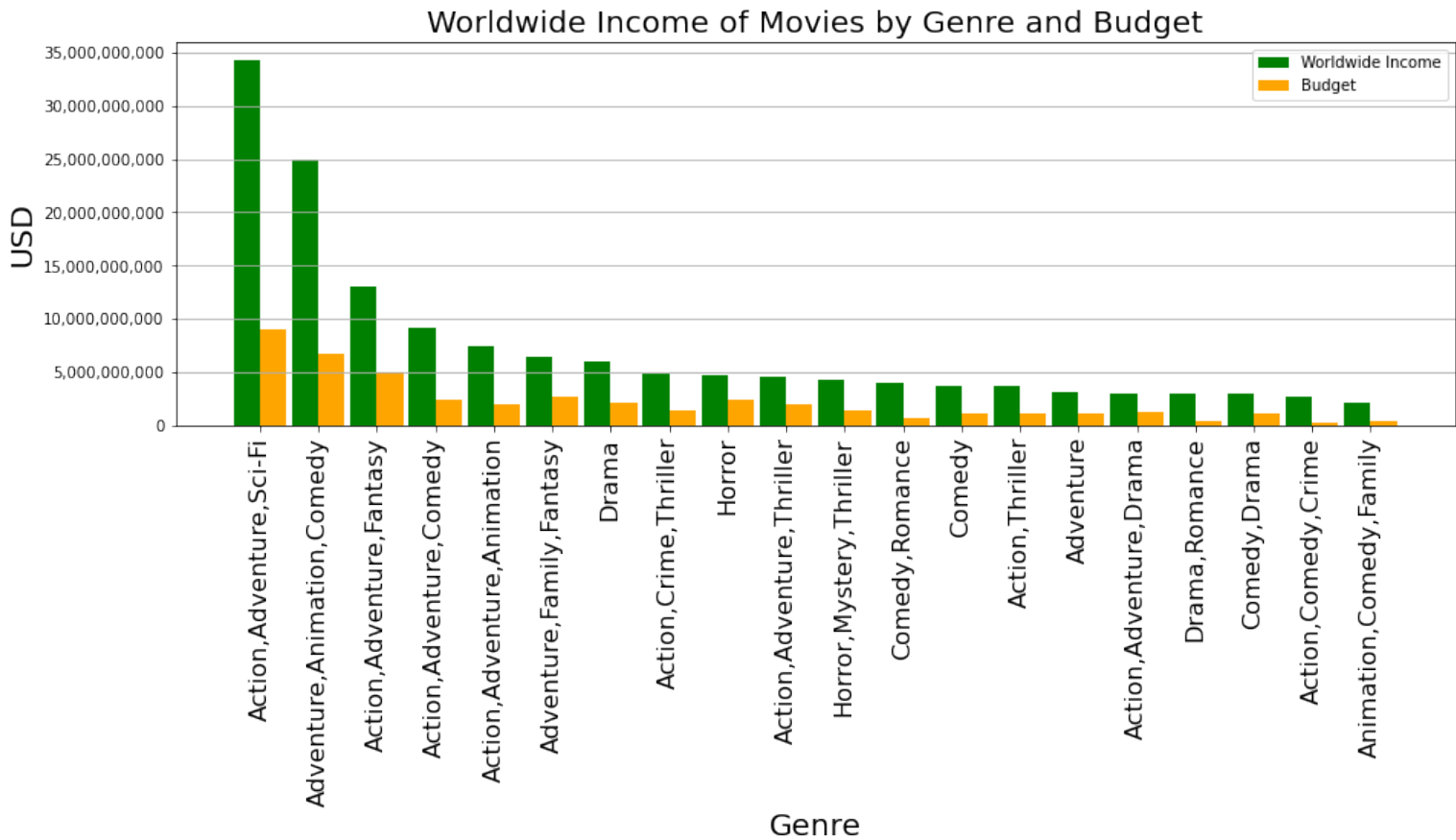Worldwide Income of Movies by Genre and Budget

Data Analysis and Visualizations – Budgets and Income

How is the movies income base on the genre in comparison to their production budget?

Summary

- Crossover with total gross and popularity
- Larger budget = larger profit?

Worldwide Income of Movies by Genre and Budget
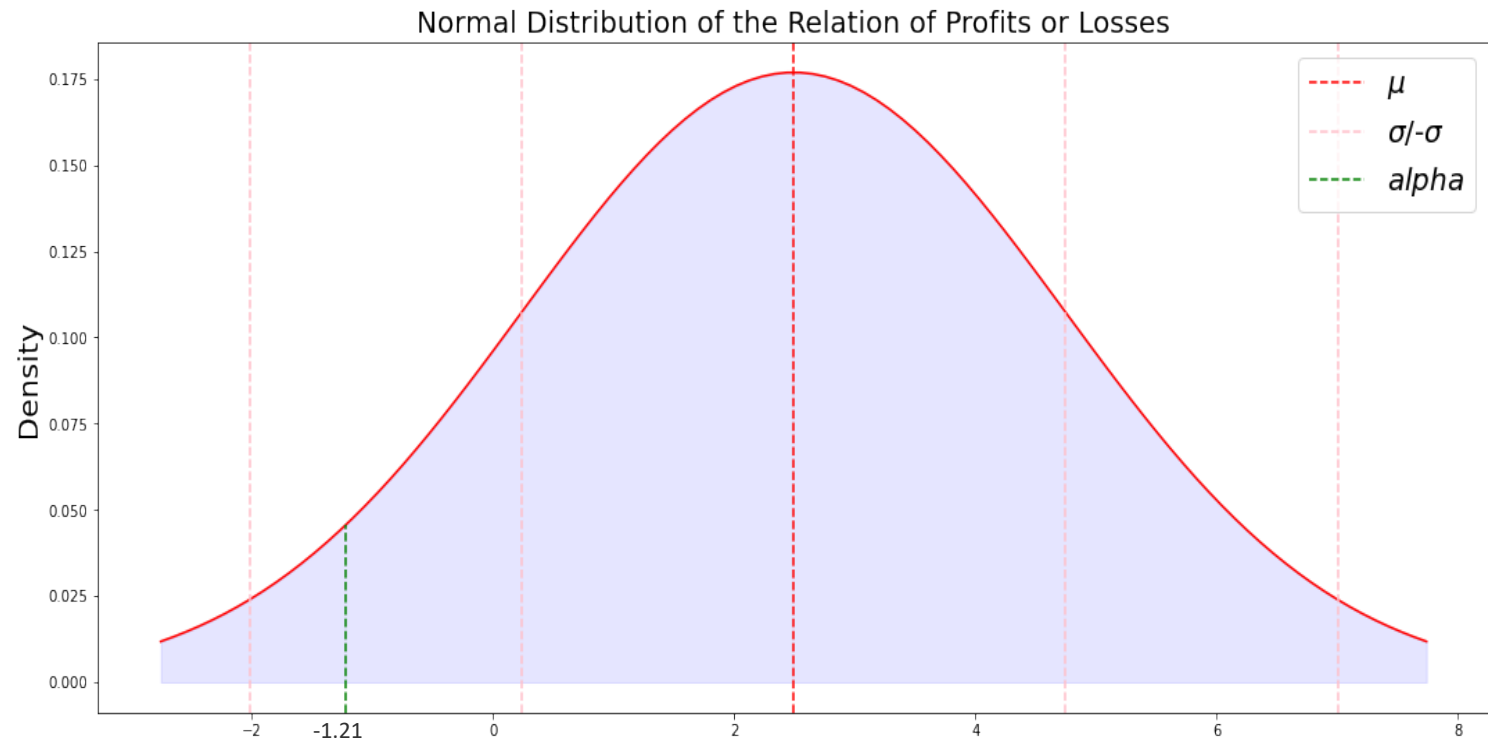
Statistical Analysis on Budget vs Profit

Does having a larger budget produce more profit?

Hypotheses

- H0: Having a larger budget will not increase the profit of a movie by genre
- H1: Having a larger budget will increase the profit of a movie by genre

Statistical Testing

- Sample Mean = 2.4923 [Percentage (x100)]
- Sample STDEV = 2.558 [Percentage (x100)]
- Sample Size = 100 genres
- Z-score = -1.0691
- P-value = 0.1425
- Alpha = 0.05

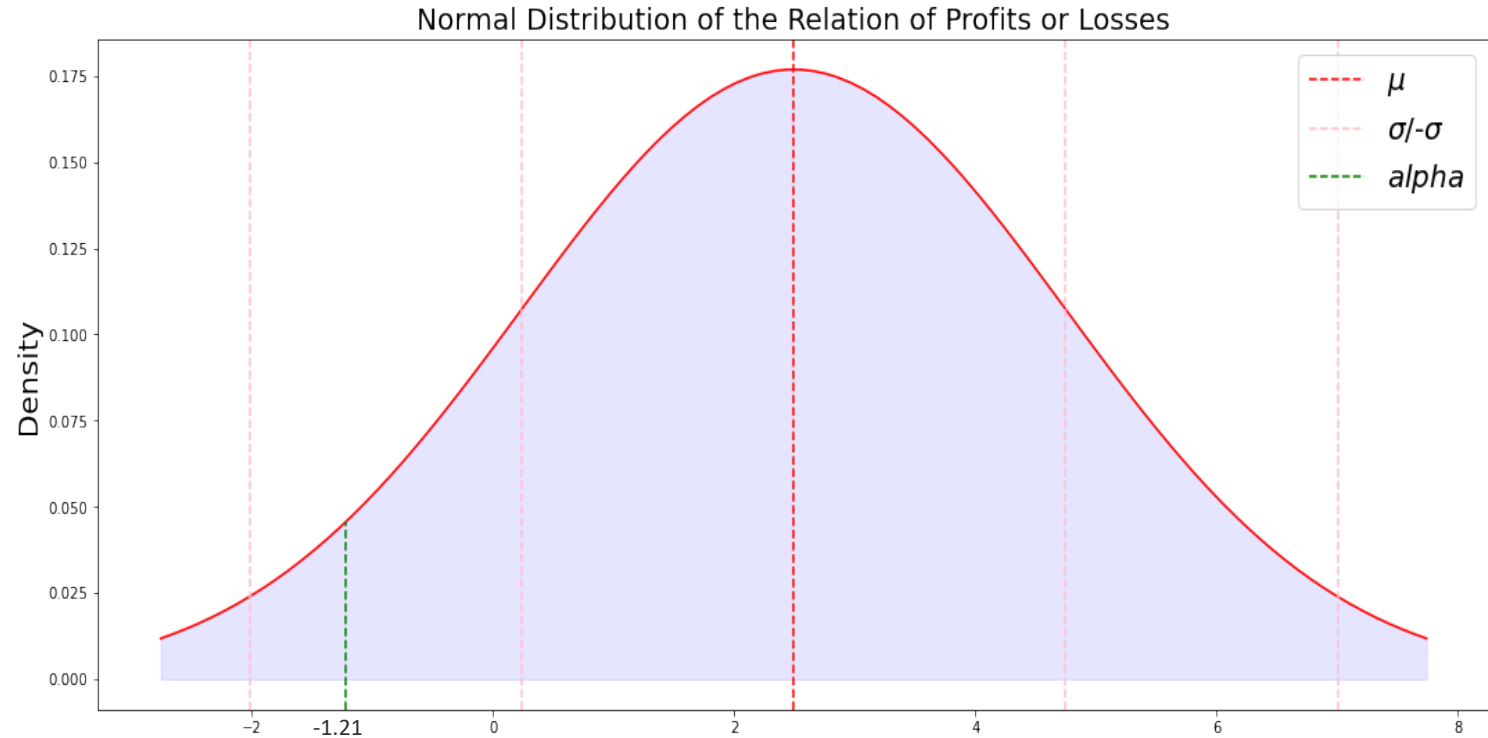Normal Distribution of the Relation of Profits or Losses

Statistical Analysis on Budget vs Profit

Does having a larger budget produce more profit?

Summary

- Based on this data, with our p-value being larger than our alpha we fail to reject the null hypothesis .

- Having a larger budget does not necessarily mean larger profits.

Normal Distribution of the Relation of Profits or Losses

Data Analysis and Visualizations – Studio

What studio could Computing Vision work with to increase sales?
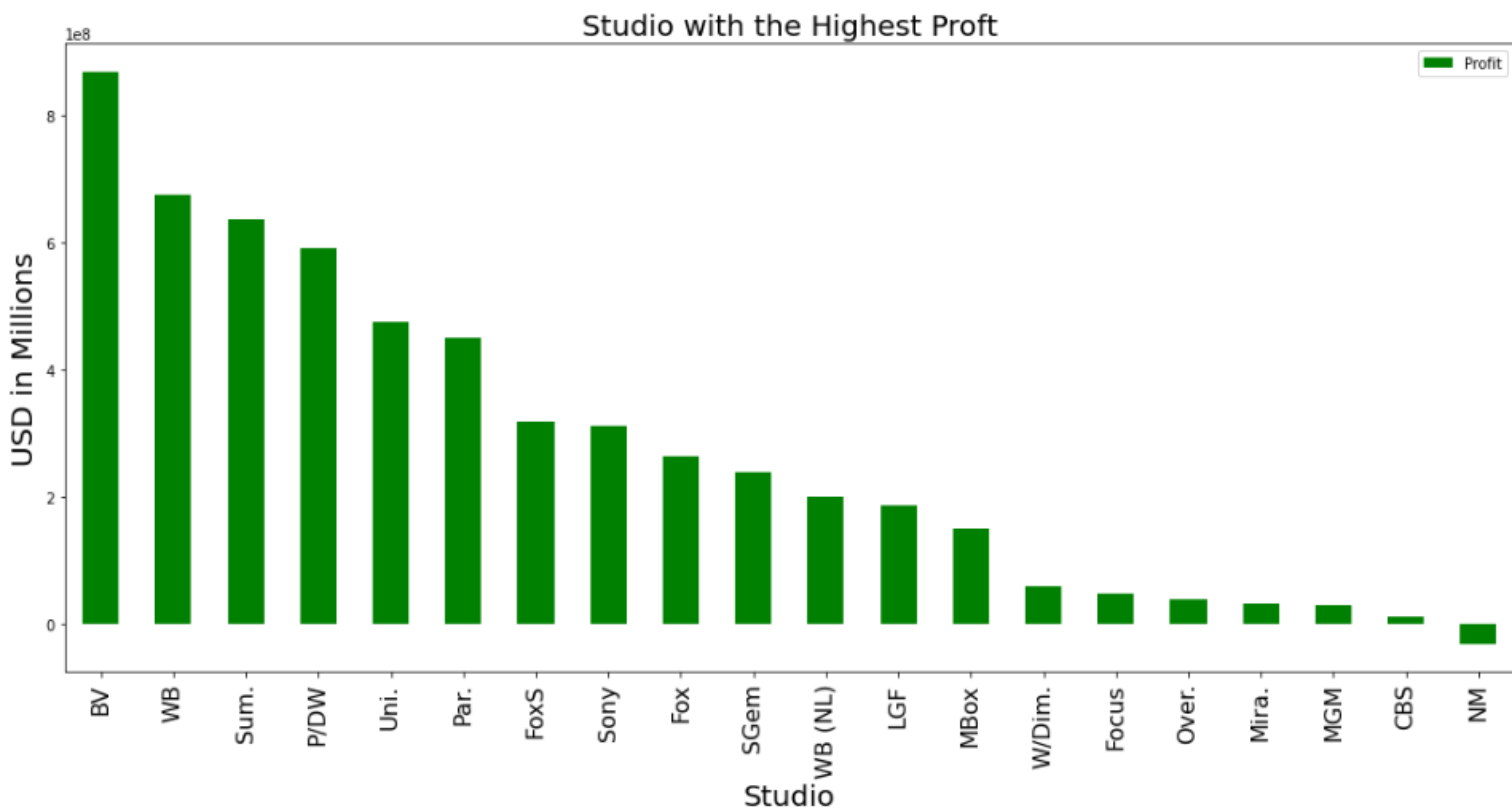
Highest Profit

- Buena Vista (Disney)
- Warner Brother
- Sum.

Lowest Profit

- Amazon
- AIC
- TFA

Summary

- Studio connection could increase profit
- Disney owns Marvel (action/adventure)

Studio with the Highest Proft

Data Analysis and Visualizations – Director

What director could Computing Vision work with to increase sales?
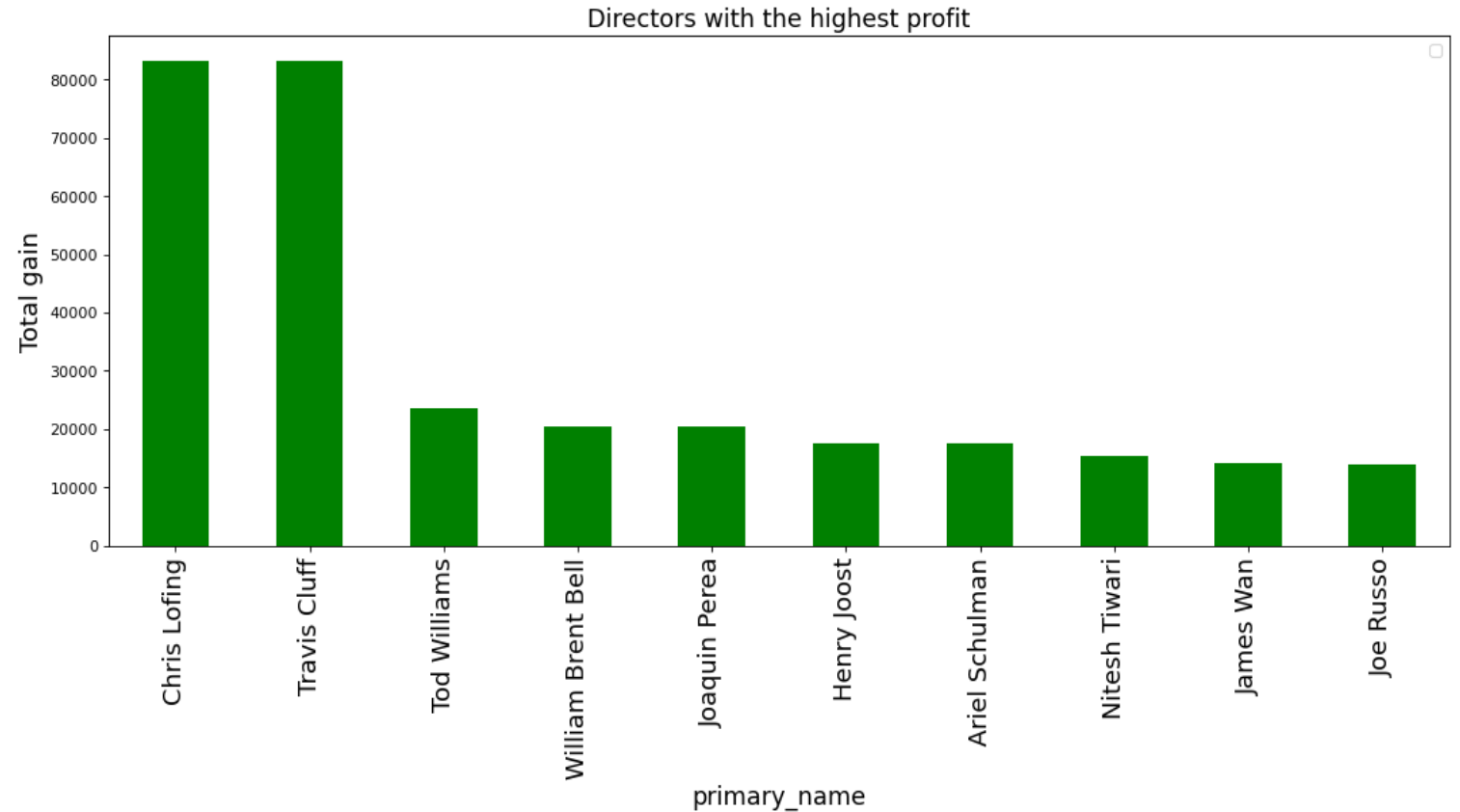
Directors with highest profit

- Chris Lofing
- Travis Cluff
- Tod Williams

Directors with lowest profit

- Jon M. Chu (1.6)
- Yi-An Lu (1.7)
- Kaizad Gustad (1.7)

Summary

- Chris Lofing and Travis Cluff the strongest options.

Directors with the highest profit

Conclusion

Our Recommendations/ Next Steps

Based on our findings and comparing the data collected, we recommend these action plans for Computing Vision

Key Business Questions

What movies are doing well at the box office by genre and popularity ratings?

What is the relationship between production budgets and income by genre?

What studio or director could Computing Vision work with to increase sales?

Is there a benefit to producing a film domestic vs foreign?

Recommendations

Computing Vision should consider making an action film combined with genres. This genre is successful both in popularity as well as profits.

Git-ing it Done did not find a significant relationship between budget and profit.

Popular studios such as Disney and Warner Brothers produce the highest profit and would be a great partnership for Computing Vision.

Git-ing it Done would recommend for Computing vision to launch worldwide for the highest profit.

Our recommendations will be for Computing vision to partner with Buena Vista (Disney) or Warner Bros to make an action/comedy movie and to launch internationally with a modest budget for the film.

Thank You!

Questions?