SAGE HOEPFL

2023

Data Science Project: Disney Success Data

Problem Statement

WHERE DOES THE SOURCE OF SUCCESS RESIDE?

The problem at hand is to identify the key factors and values that have contributed to the tremendous success of Disney as a company.

LET’S GET STARTED

Benefits of Analysis

Continued Success

This analysis can provide valuable insights into how other organizations can replicate Disney's success and improve their own performance in the industry.

Director Success

This analysis offers a perspective on the correlation between a director's contribution and the success of a movie, as measured by the total gross income attributed to that director.

Movie Success

This analysis offers valuable insights into how the genre and title of a movie contribute to the success of Disney films.

Methodology

1.

To compare values between the movies' total gross dataset and Disney directors dataset, **I merged the two datasets.**

2.

I **utilized groupby functions** to establish the relationship between directors, genre, rating, top movies, release date, and total gross income.

3.

Visualizations were generated to illustrate the relationship between these distinct values. A machine learning model was then created to predict the director based off the movie title.

Challenges

1.

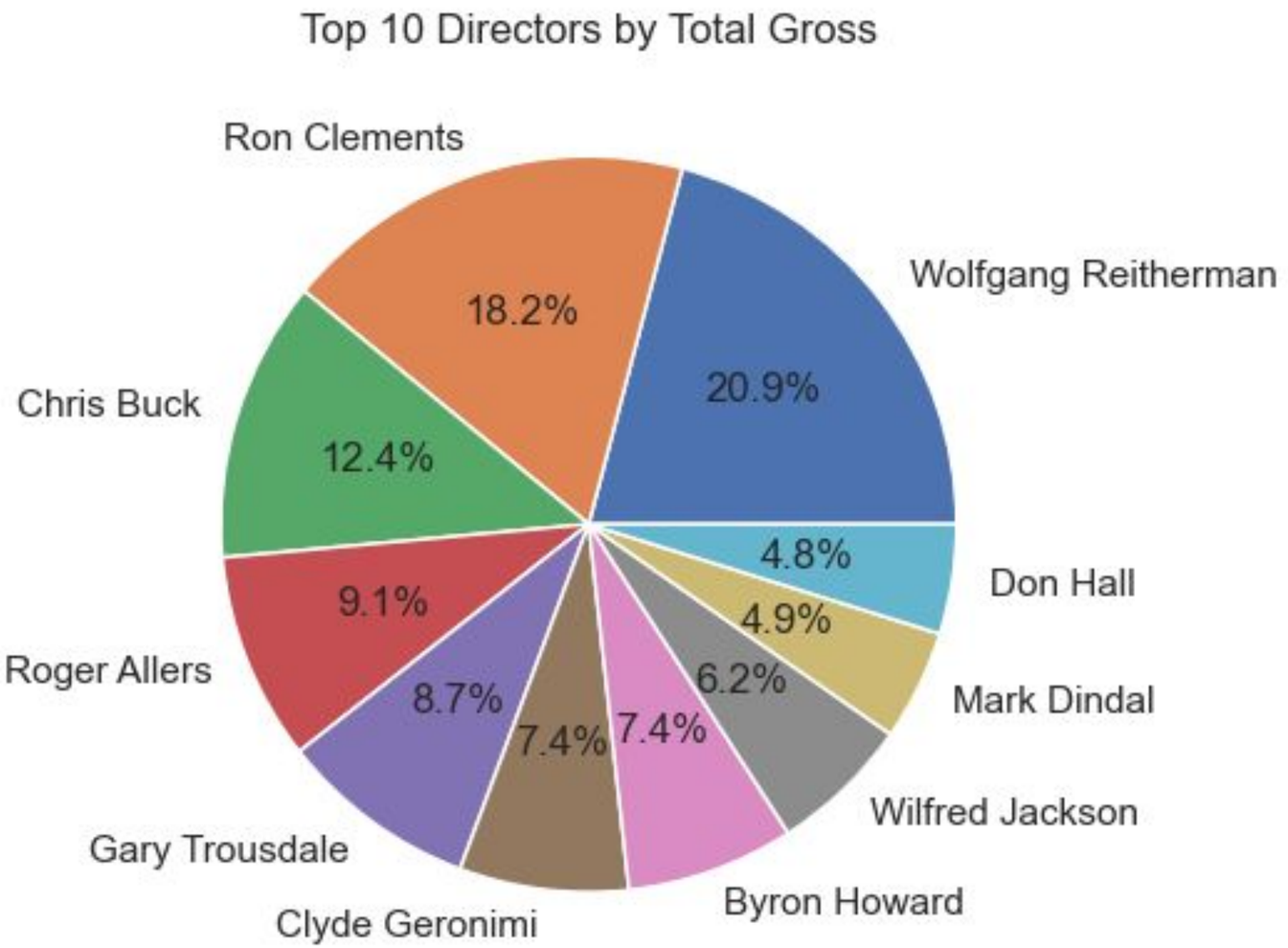
To deal with the challenge of having the total gross income format in a string that included symbols like '$' and ',', I resolved the issue by utilizing the replace function and converting the string into an integer format.

2.

While developing a scatter plot visualization for top-grossing movies, I encountered an issue where the highest values were displayed at the bottom of the chart. To resolve this, I sorted the total gross values in ascending order.

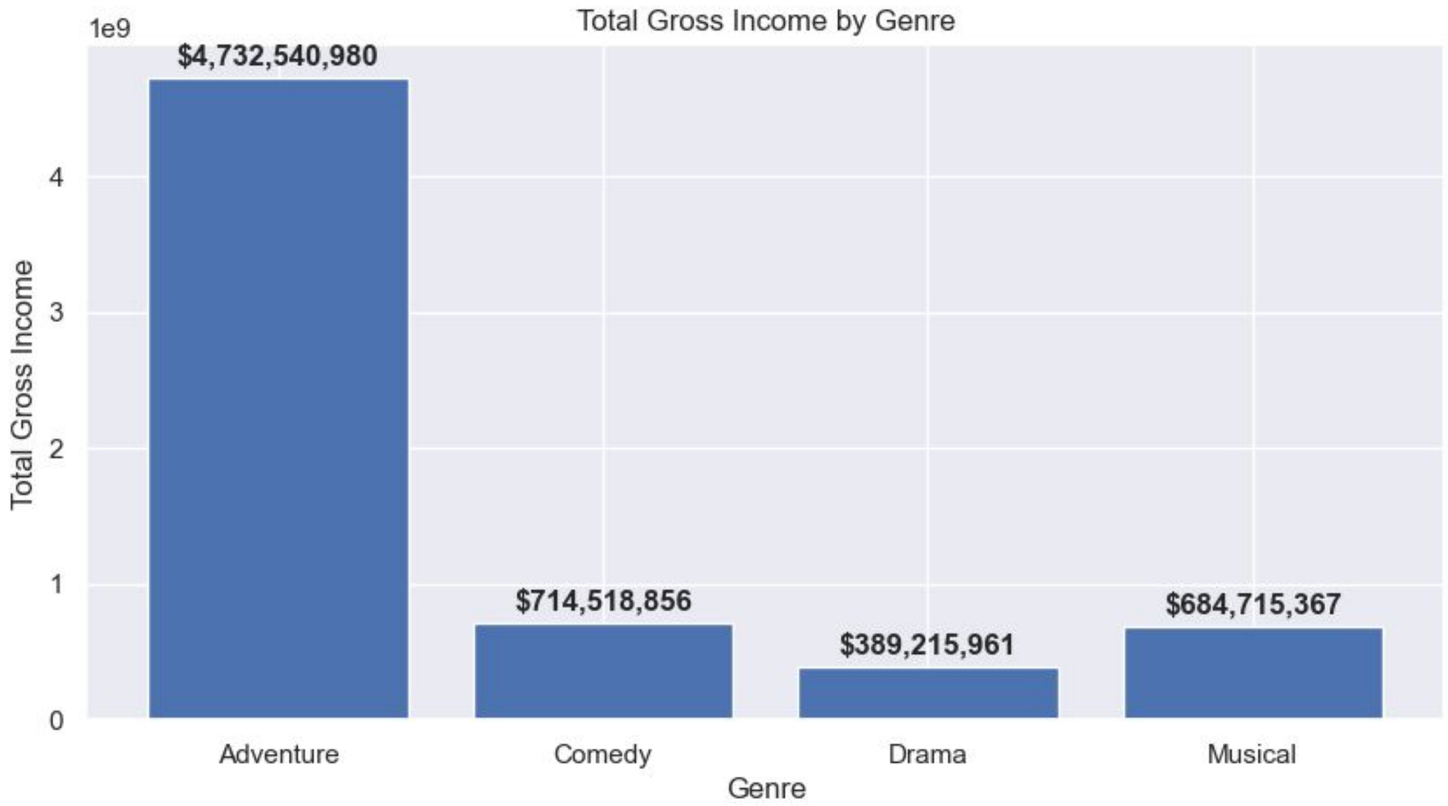
Which top ten directors performed the best?

Wolfgang Reitherman is the top director, then Ron Clements, then Chris Buck.



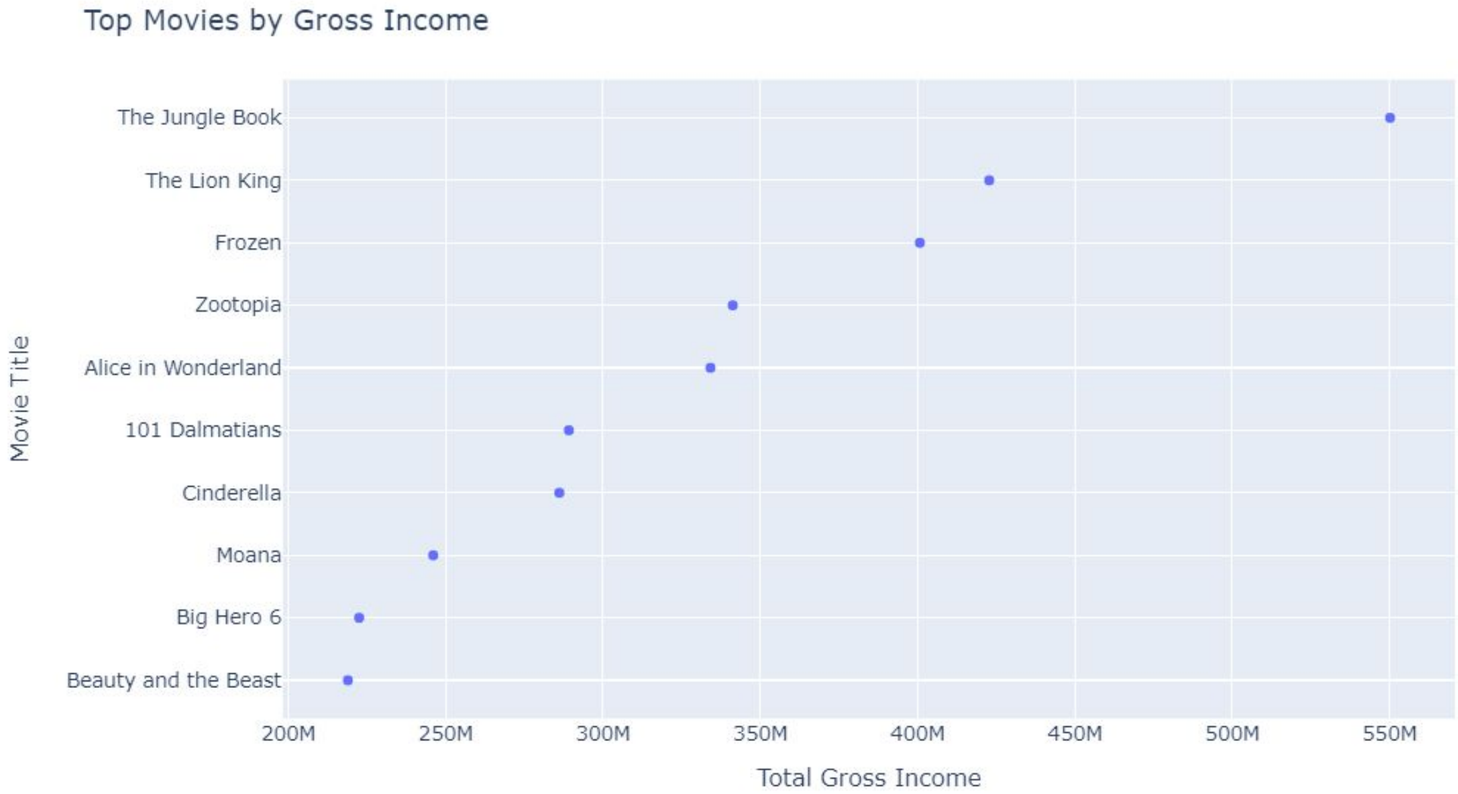
Which genre performed the best?

Adventure performed the best regarding total gross income.



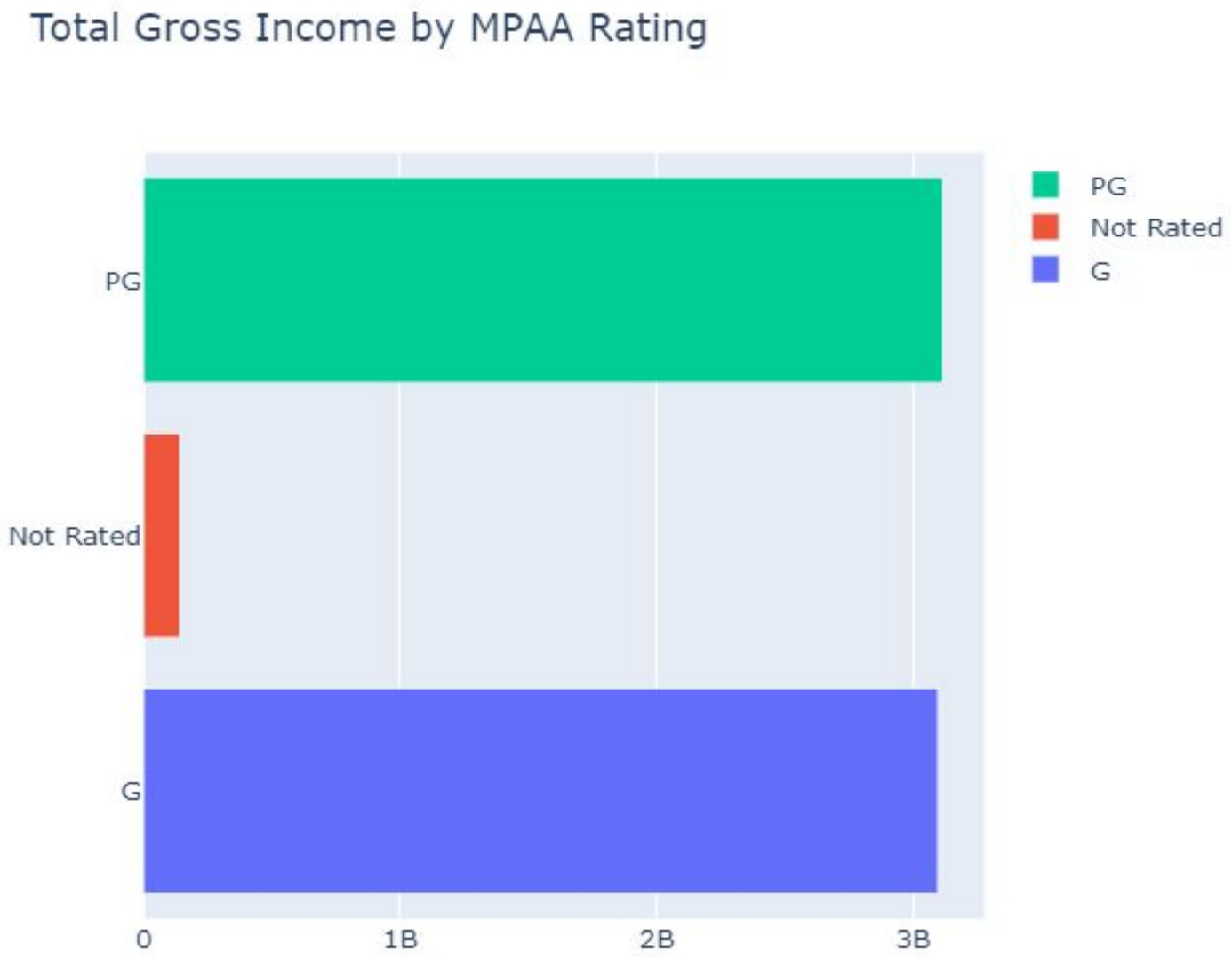
Which movie performed the best?

Jungle Book performed the best due to the 3 Jungle Book movies being recorded in the dataset



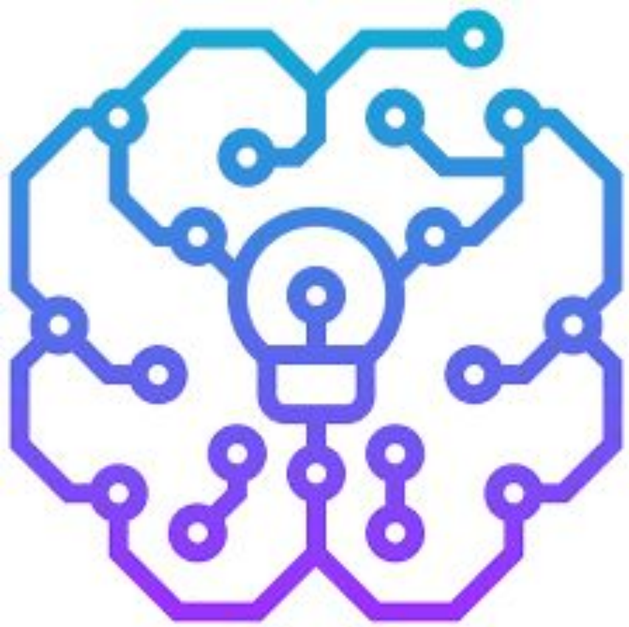
Does the rating affect the gross income?

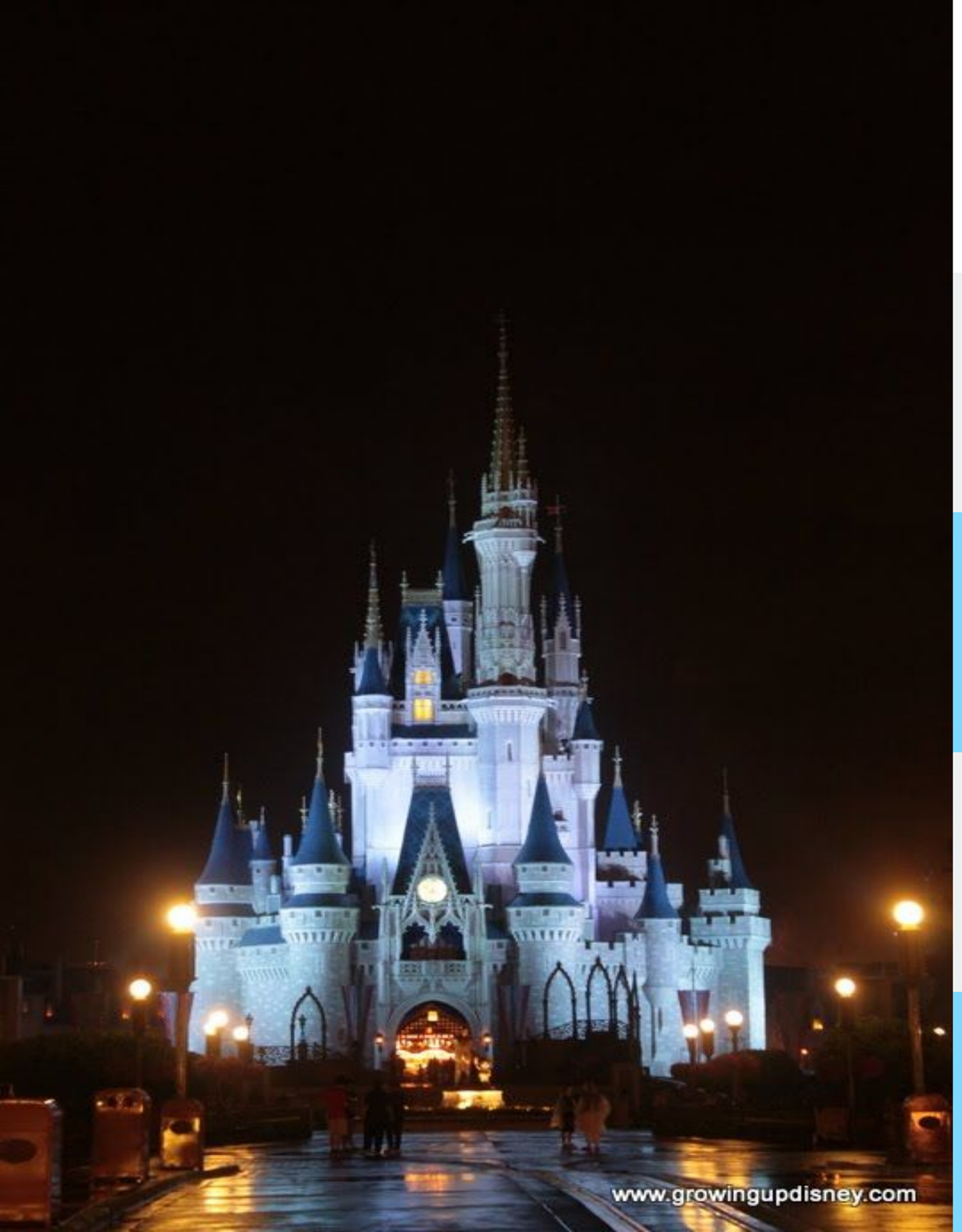
The rating between PG and G movies in regards to total gross income does not show a large difference, as not rated provides less income.



Machine Learning Model

I trained a decision tree machine learning model to accurately predict the director of a movie based on its title input. The model performed well and produced accurate director predictions.





Recommendations

DIRECTORS	To maintain success in movies, it is advisable to either retain the same directors for future projects or select directors who possess a similar directing style.
MOVIES	Generating sequels for successful movies or those with a comparable style is recommended.
GENRE	It's important to produce a larger number of adventure-themed movies while creating films since they generally perform well.
RATING	Keep ratings of movies to either PG or G as Not Rated does not provide as much income as the other ratings.

Future Work

Join in more data

An improvement for this project would be to join in more data with different values to compare against total gross income.

Create another Machine Learning Model

Creating a machine learning model to predict the gross income by director would be beneficial to this project.

Experiment with Tableau or Plotly

Uploading this data into Tableau would be able to generate more appealing visualizations, as well as learning more about styling plotly graphs.

More Time

Having more time to complete this project would allow me to implement all of these tasks into this project.

SAGE HOEPFL

Thank you!

Questions?