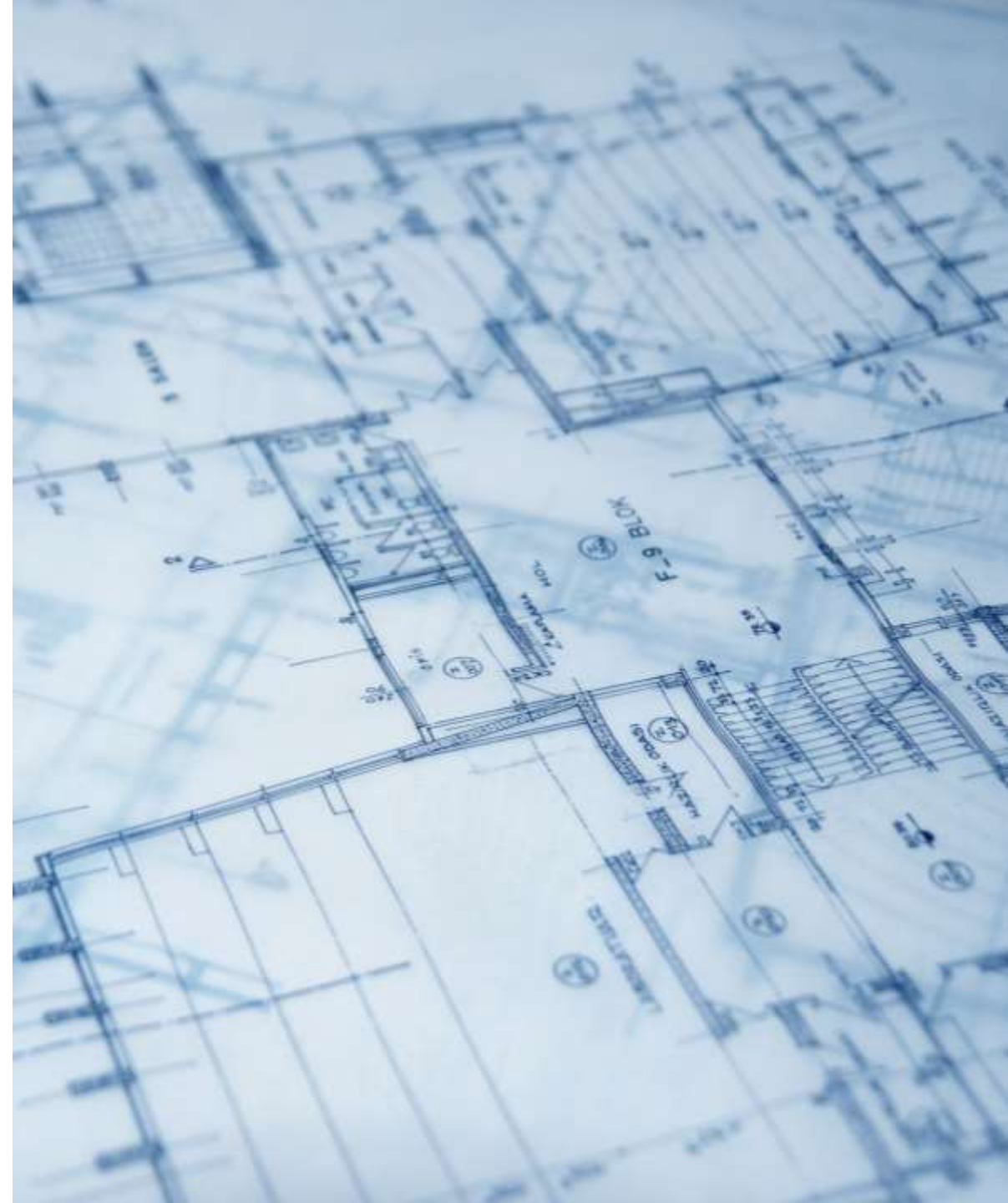

BOX OFFICE BLUEPRINT

DATA-DRIVEN INSIGHTS FOR A
NEW MOVIE STUDIO



OBJECTIVES

1. Predict Domestic Box Office Revenue Based on Year and Studio
2. Estimate Foreign Gross Earnings Using Domestic Performance
3. Predict Total Gross Revenue (Domestic + Foreign) Using Available Features
4. Analyze the Trend of Domestic Revenue Over Time
5. Compare Studio Impact on Revenue While Controlling for Year



BUSINESS PROBLEM

My company now sees all the big companies creating original video content and they want to get in on the fun. And have decided to create a new movie studio, but they don't know anything about creating movies.



DATA UNDERSTANDING

- Cleaned and explored the dataset.
- Built regression models for predicting gross revenue.
- Assessed trends by studio and year.
- Evaluated model performance using R squared and MSE.



WHAT THE DATA REVEALS

Based on
our
objectives:

R^2 Score = 0.2805 the model explains 28% of the variation in U.S. domestic gross revenue using only studio and year.

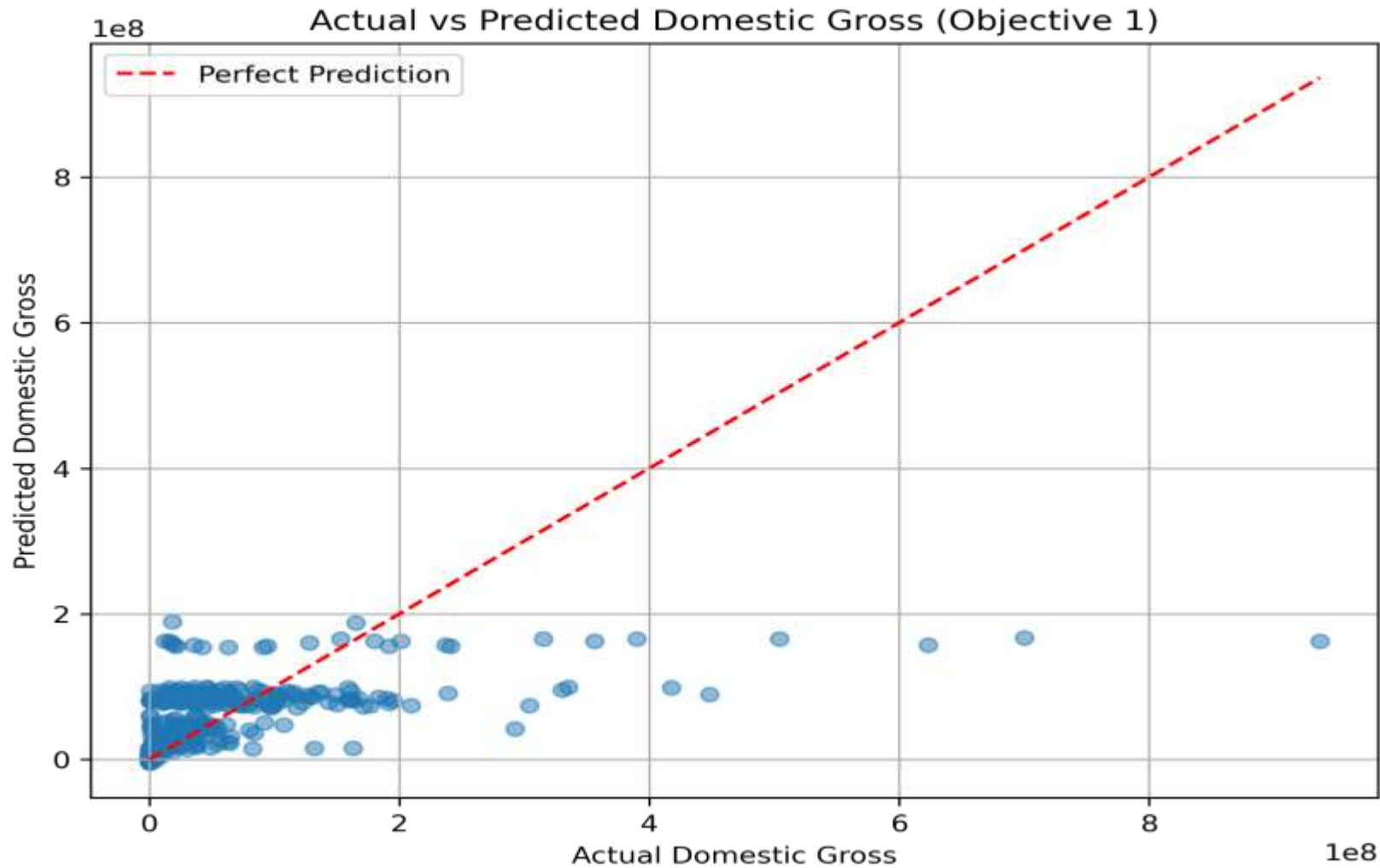
R^2 : 0.6994894672594614 means that about 70% of the variance in foreign gross is explained by domestic gross.

R^2 : 0.2712448701958182 the model explains about 27% of the variation in total_gross using just studio and year.

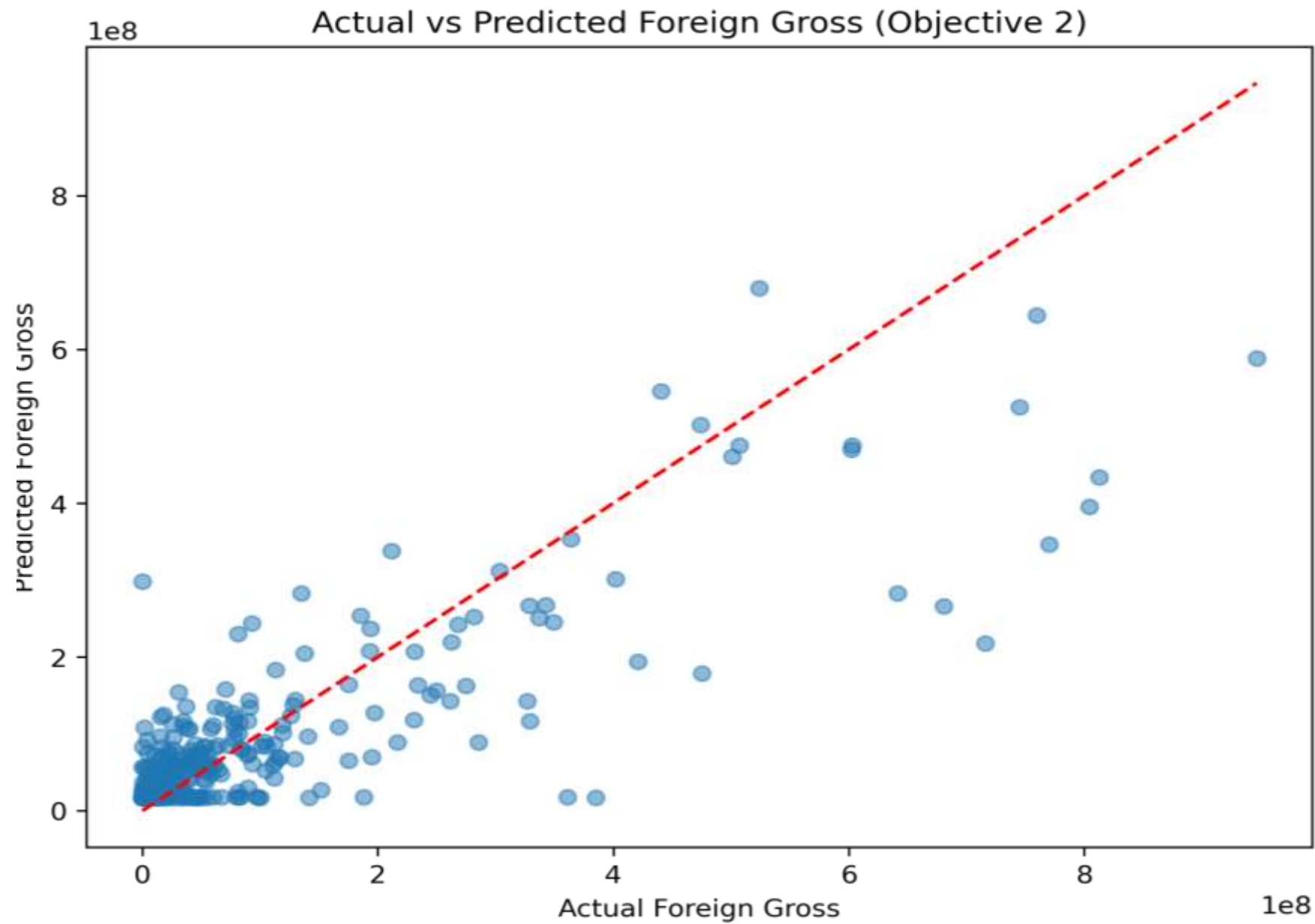
R^2 : 0.027253426852850926 means that only 2.7% of the variance in domestic gross is explained by the year of release.

R^2 : 0.2712448701958182 the model explains about 27% of the variation in total_gross using only studio and year.

VISUALISATIONS

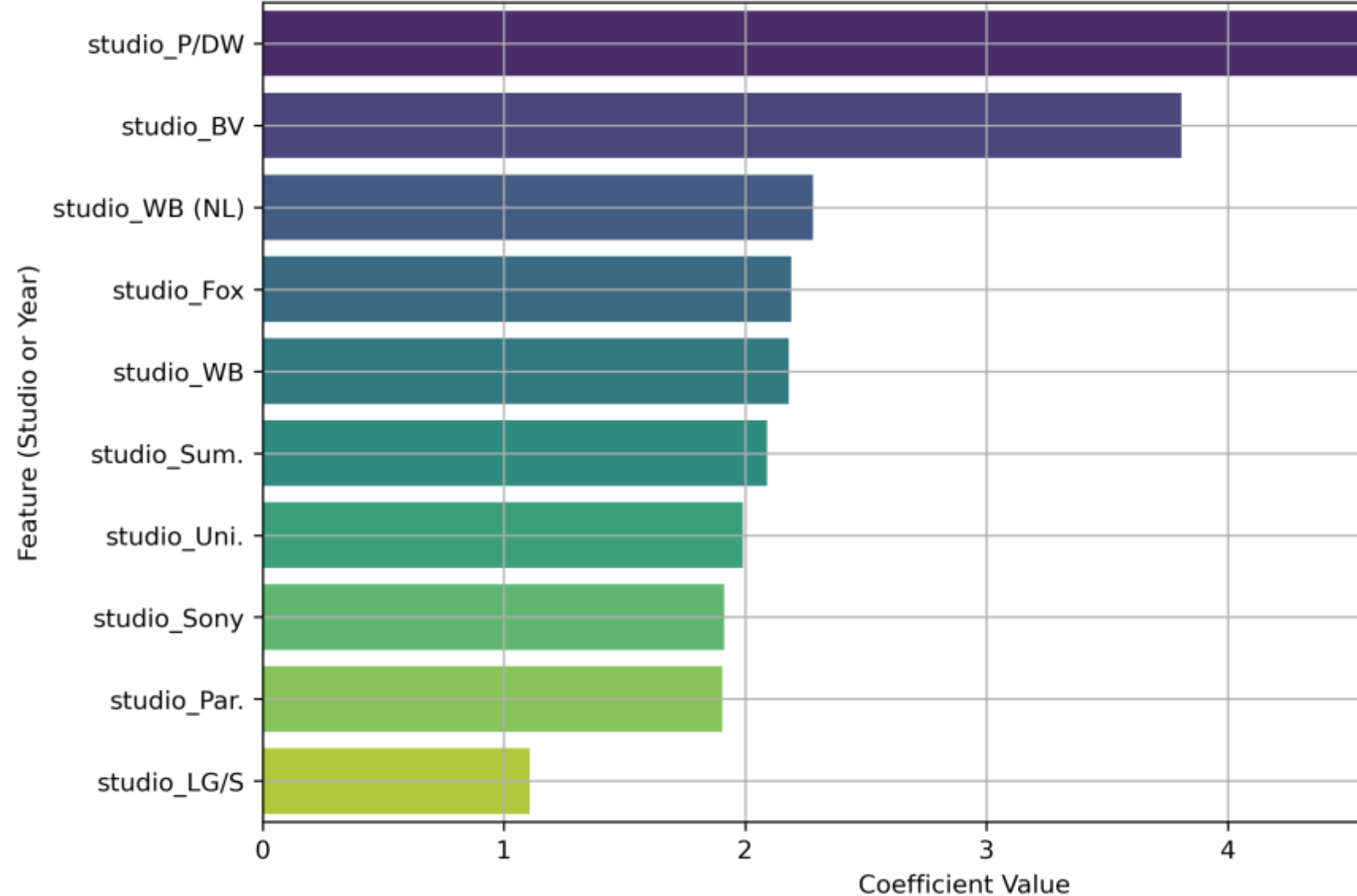


- The goal is to estimate how much a movie earns in the U.S. based on its studio and year.

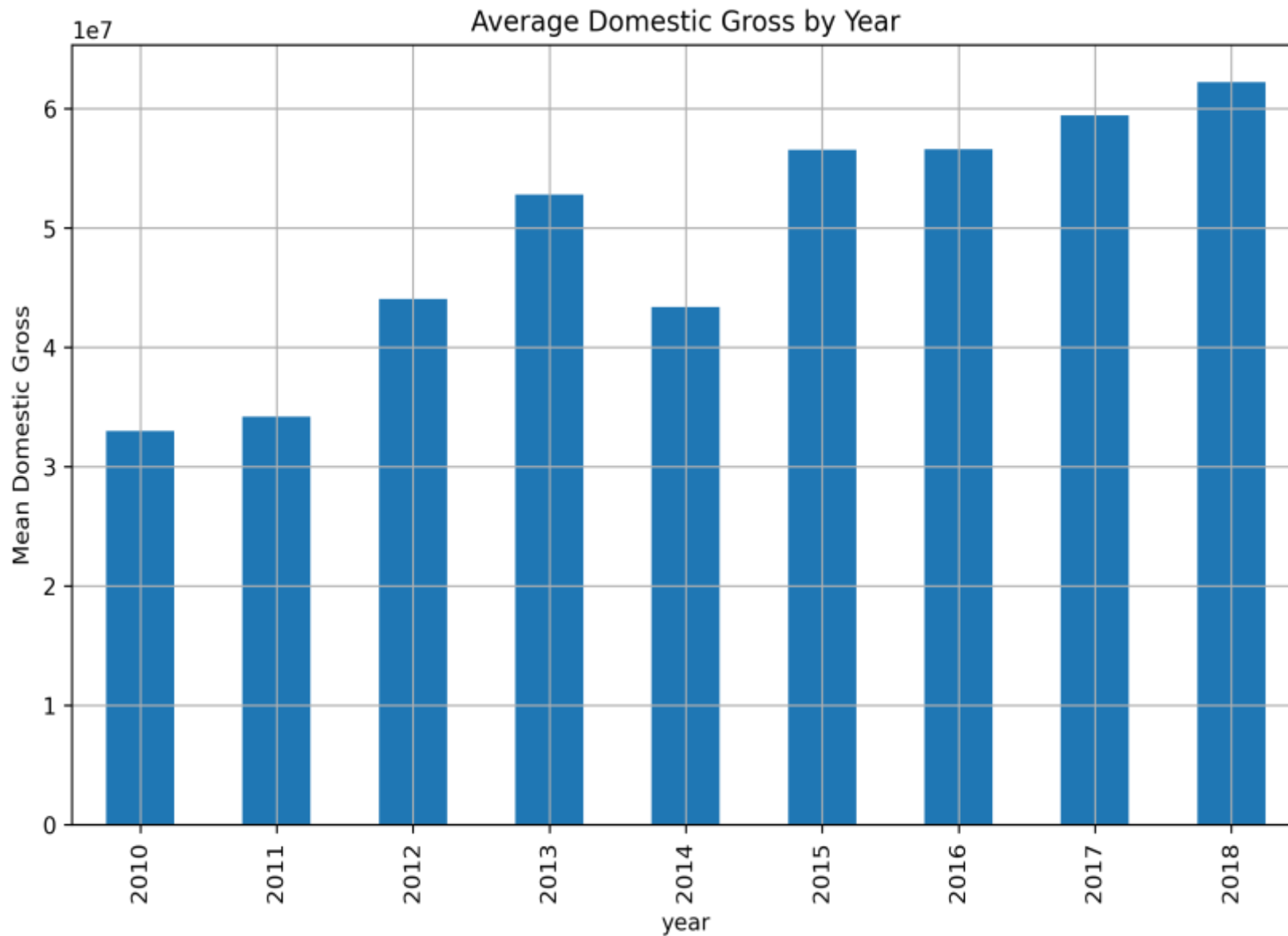


- The goal is to use domestic earnings to predict international success.

Top 10 Features Positively Affecting Total Gross

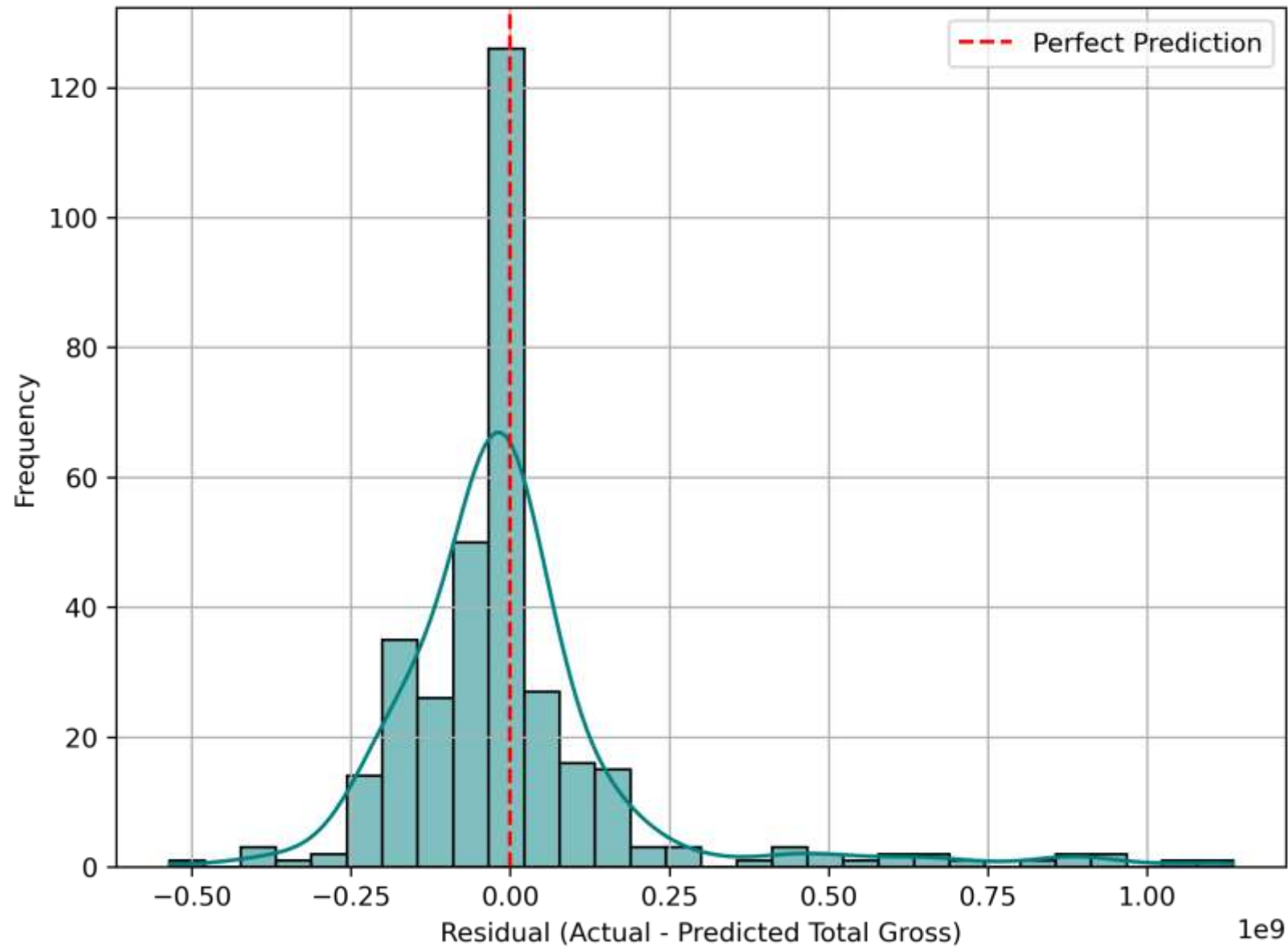


- The goal is to forecast full revenue using available numeric data



- The goal is to check whether domestic revenue is increasing or decreasing across years.

Distribution of Residuals (Refactored Objective 5)



- The goal is to estimate total revenue while isolating the impact of studio.

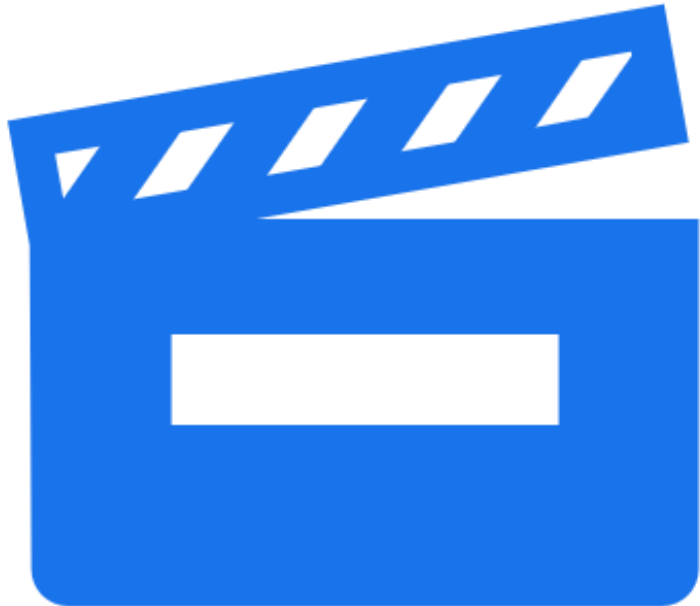
CONCLUSION

Our findings show that studio reputation and release year moderately predict domestic and total gross revenues, explaining around 27–28% of their variation.

Notably, domestic box office performance is a strong predictor of foreign revenue, with a model explaining nearly 70% of international earnings, a valuable insight for global forecasting.

Conversely, release year alone shows little predictive power, indicating that time trends have minimal influence without additional context.

MOVING FORWARD



- These results highlight that while pre-release factors like studio and timing provide useful signals, more detailed data such as genre, cast, and budget is essential for stronger predictive accuracy and strategic planning.



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THANK YOU!