

A woman with dark hair tied back is seen from the side and back, wearing a green dress with a red rose pattern. She is looking out of a window at night, with a dark interior visible behind her. The scene outside is dimly lit, showing some foliage and a building across the street.

Predicting the Domestic Success of Foreign Language Films

Cecilia Bell

The Lonely Subtitle: Here's Why U.S. Audiences Are Abandoning Foreign-Language Films

The New York Times

'Parasite' Earns Best-Picture Oscar, First for a Movie Not in English

Question

Can I predict the domestic success of foreign language films?

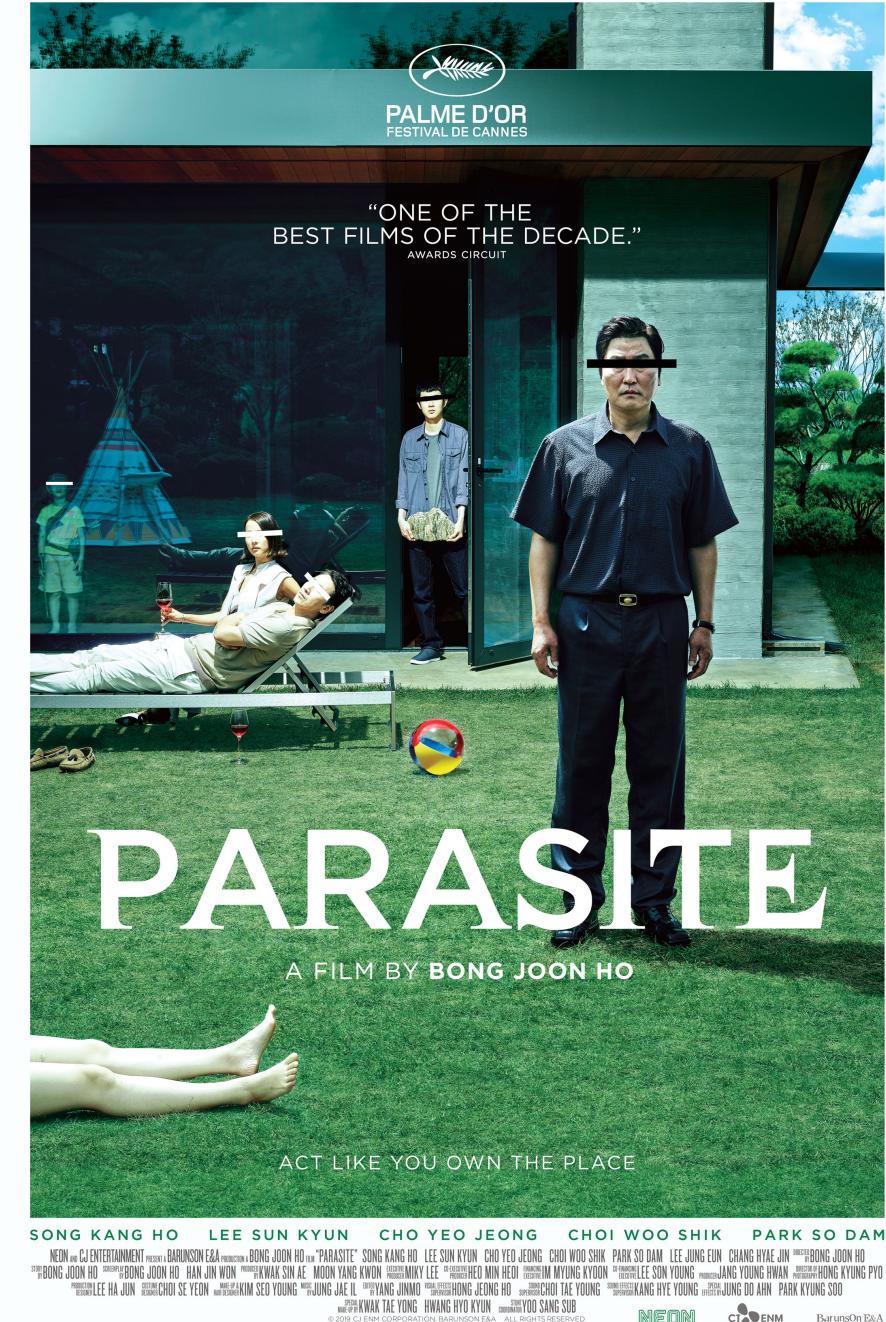


Question

Can I predict the domestic success of foreign language films?

Domestic success:

- US & Canada
 - Profit
 - Revenue – scaled portion of budget
 - Adjusted for inflation



Data

- Box Office Mojo
- IMDB



Data

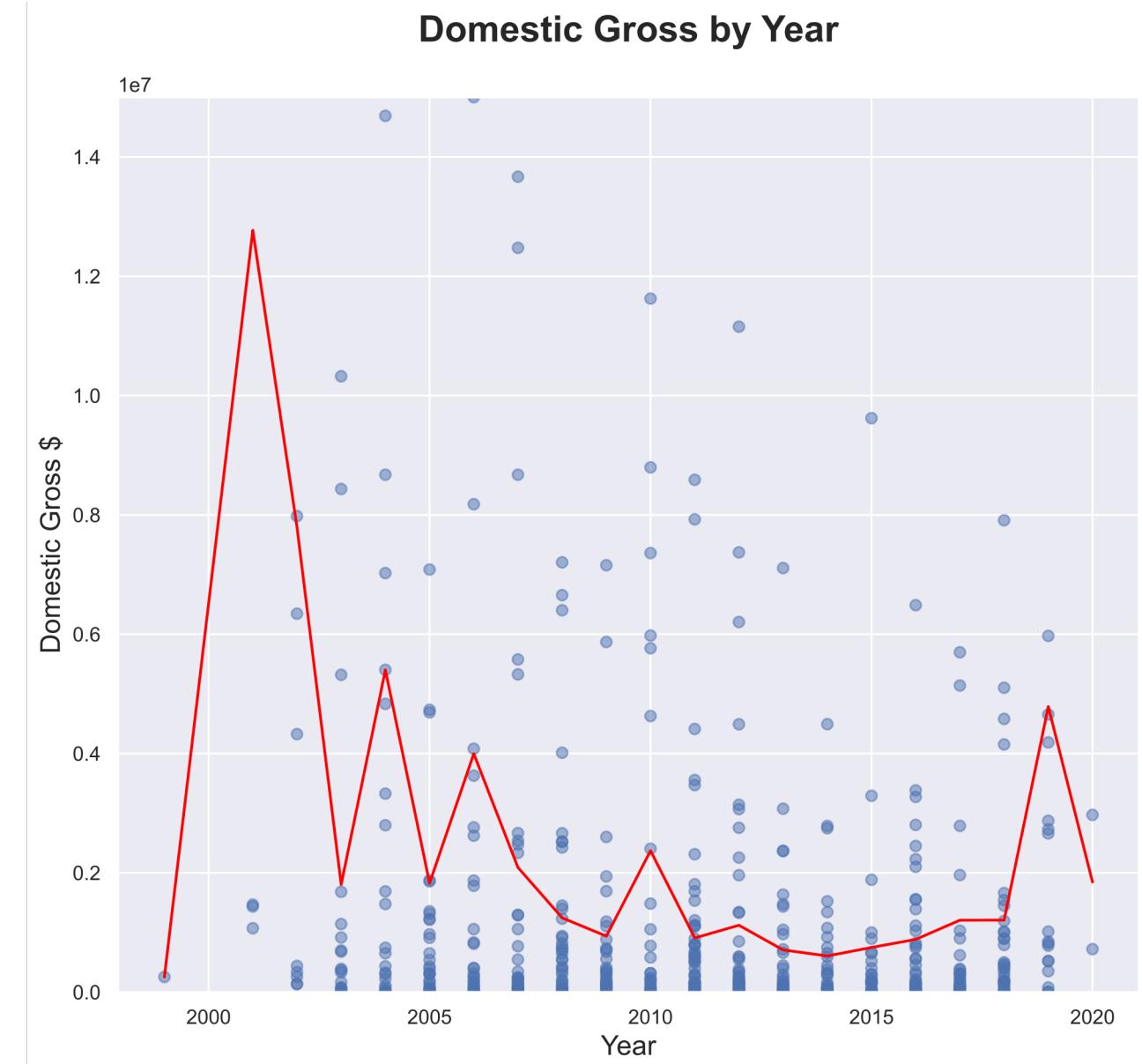
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Tools

- Beautiful Soup
- Selenium
- Pandas
 - Forex-Python
 - CPI library
- Scikit-learn



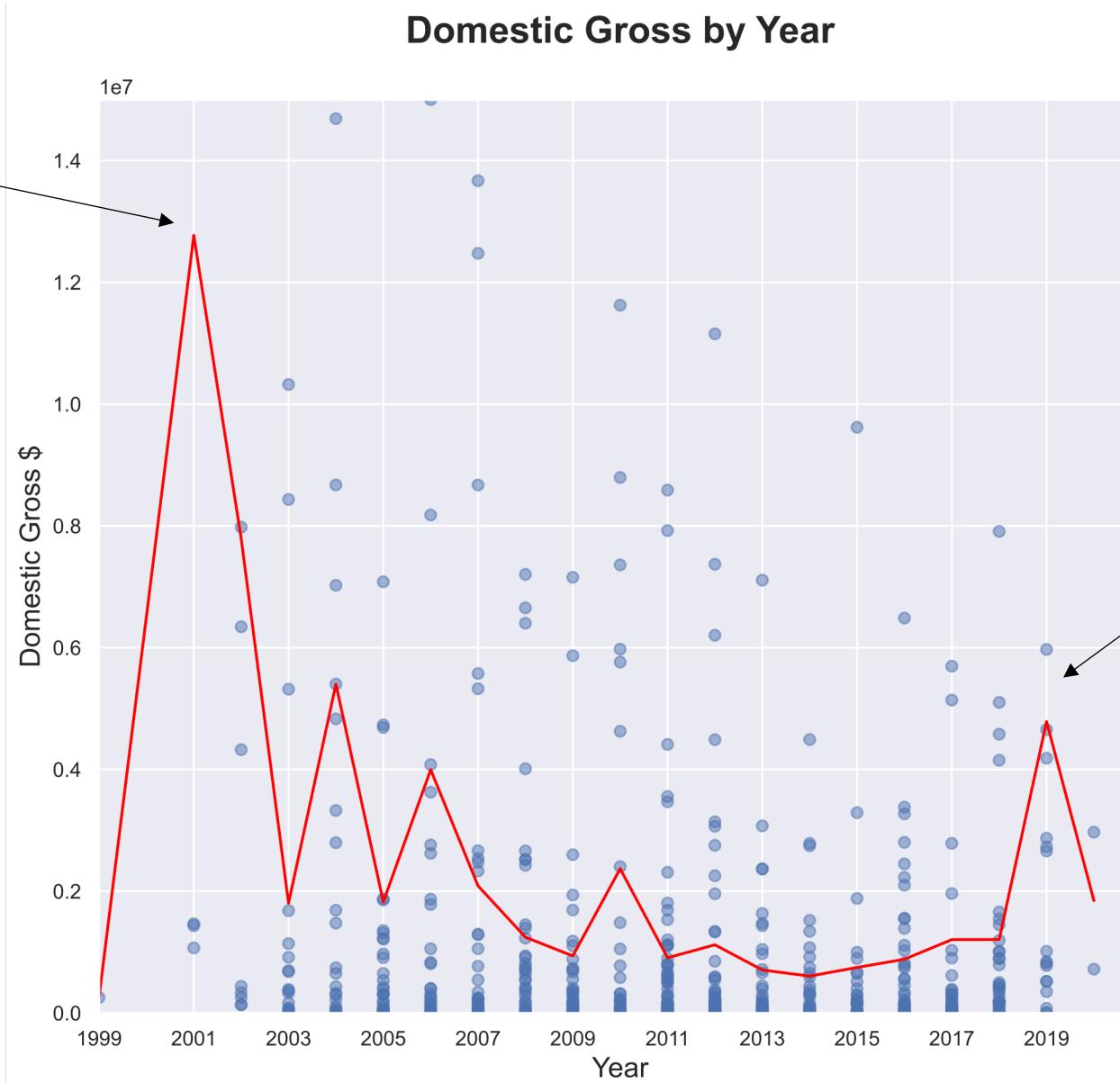
Was Anthony Kaufman right?



Domestic Gross by Year

Amélie
release year

Parasite
release year

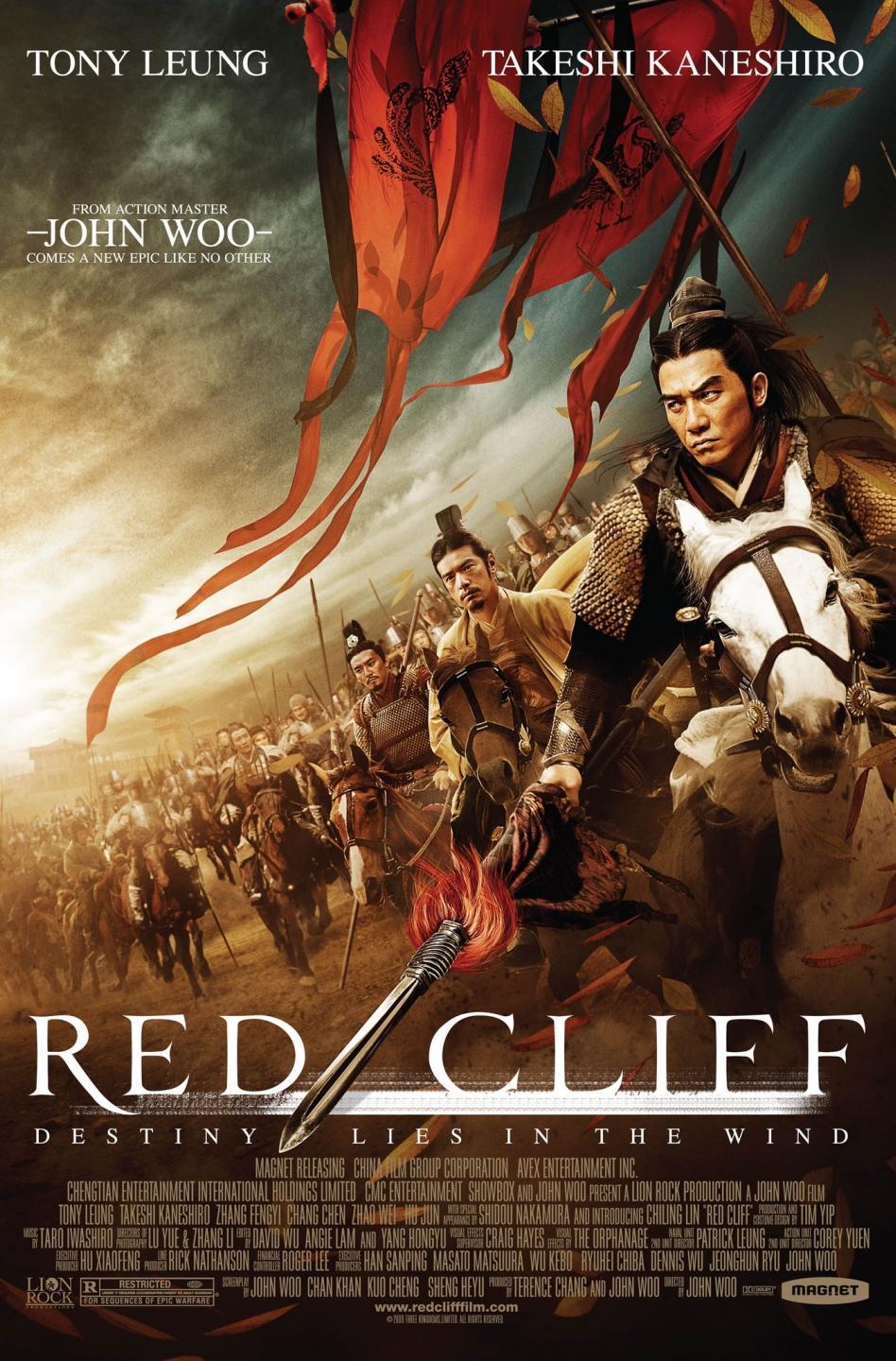


Domestic Gross by Year

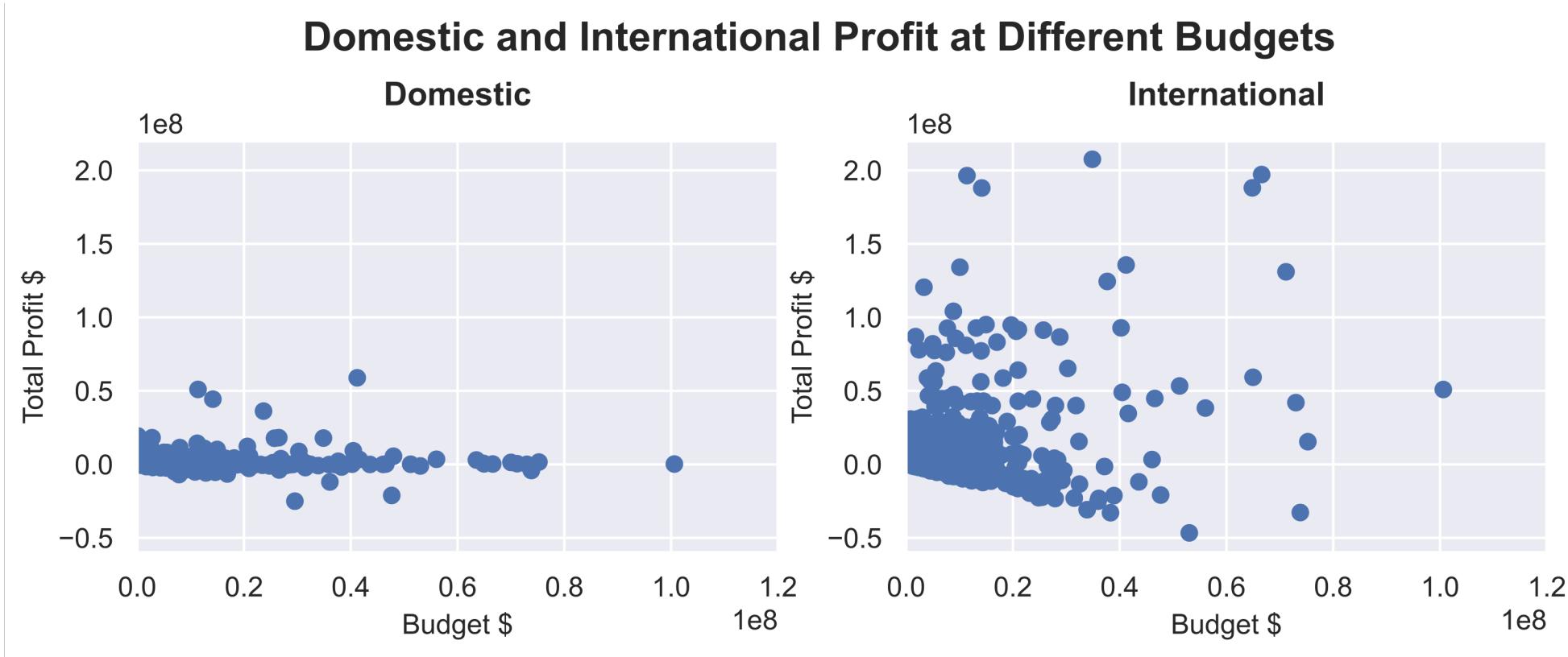


Initial Hypothesis

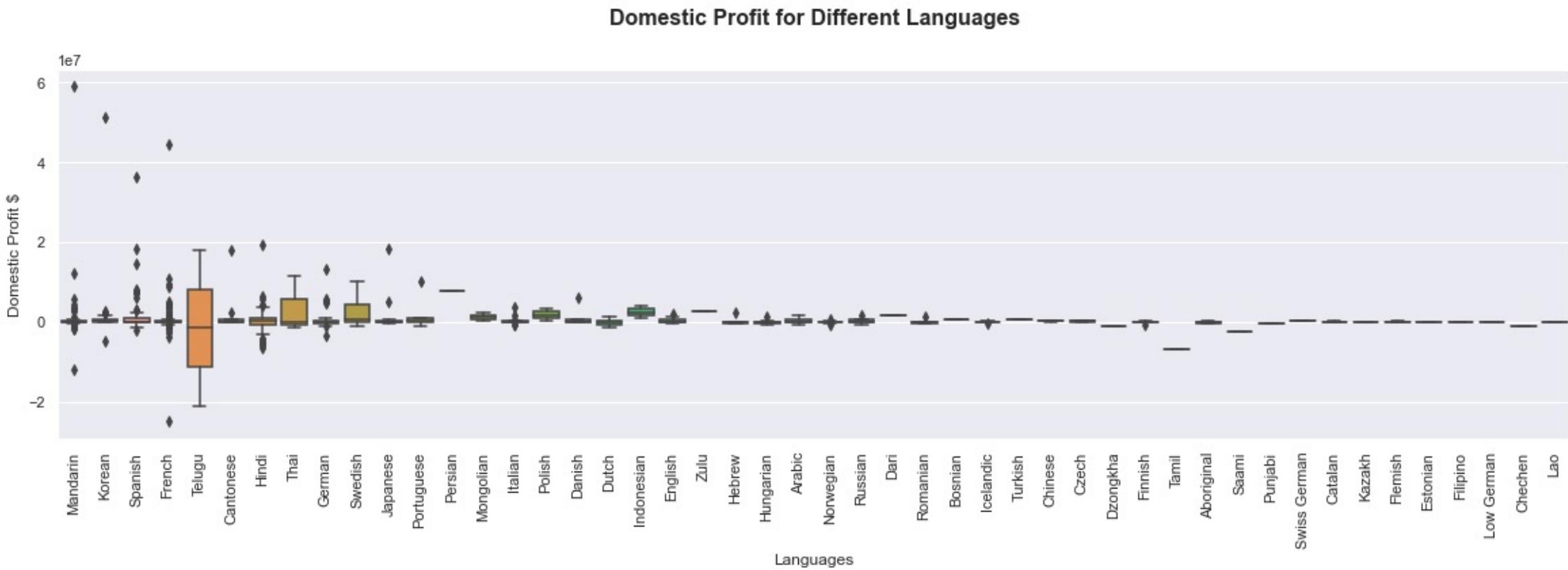
- Good predictors:
 - Budget
 - Total international profit
 - Language

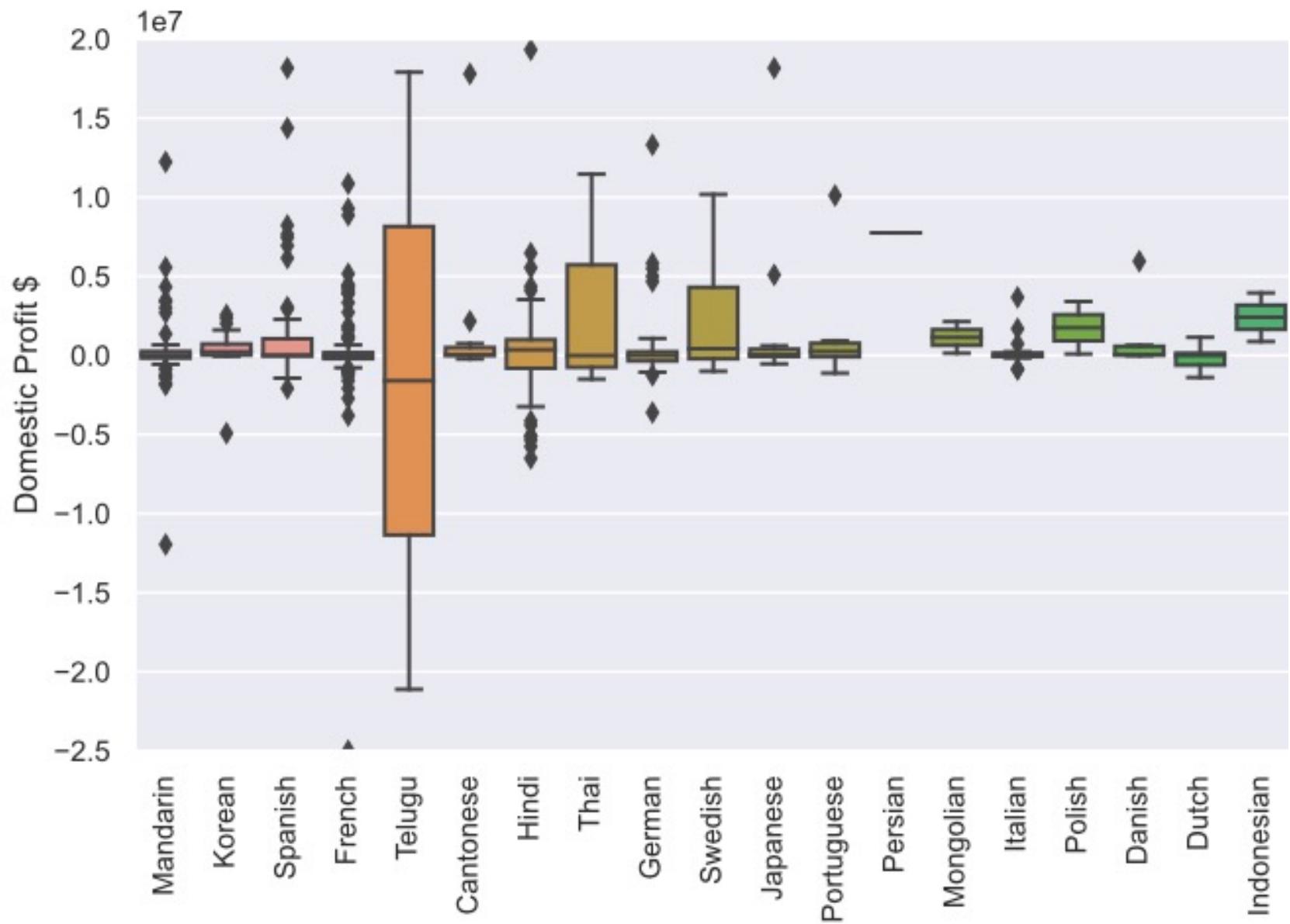


Curious Insights



Curious Insights





Model

- Ridge Regression
- Alpha = 0.01
- Features:
 - Maximum theaters * total international profit
 - Miramax
 - Domestic opening weekend gross
 - Sony Pictures Classics
 - Action
 - Thriller
 - Romance
 - Drama
 - Comedy

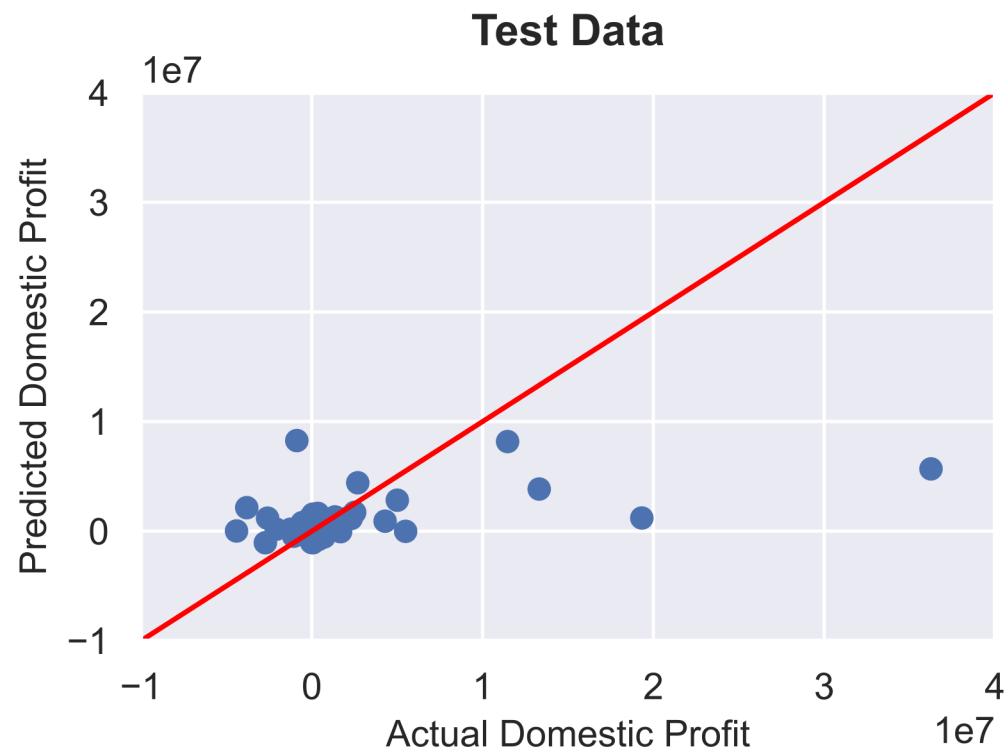
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Model performance

Actual vs. Predicted Domestic Profit



Model performance

- R²: 0.192
 - Mean training R²: 0.687
 - Mean validation R²: 0.441



Model performance

- R2: 0.192
 - Mean training R2: 0.687
 - Mean validation R2: 0.441
- MAE: \$1,920,000



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- Budget does not appear to correlate with domestic success
- Domestic distributor and genre are more important
- More granular data may be needed
- Different models for different kinds of foreign language films?

A photograph of a man and a woman eating ramen. The man, on the left, wears a light blue button-down shirt with a tropical or landscape print. He is looking down at his bowl of ramen. The woman, on the right, wears a traditional Japanese kimono with a dark pattern. She is also looking down at her bowl. They are seated at a table with two bowls of ramen, chopsticks, and some napkins. The background is slightly blurred.

Thank you