

Predicting the Domestic Success of Foreign Language Films

Cecilia Bell

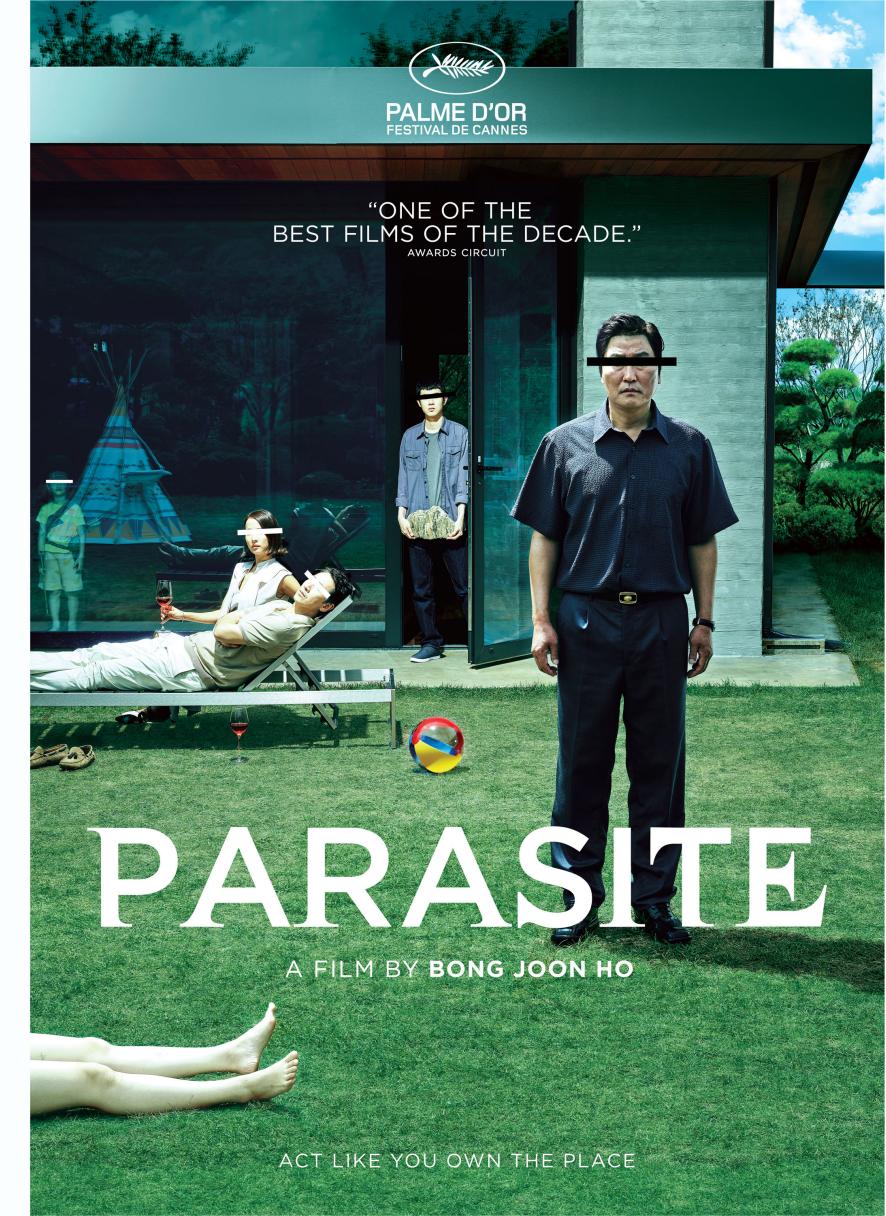
The Lonely Subtitle: Here's Why U.S. Audiences Are Abandoning Foreign-Language Films

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?



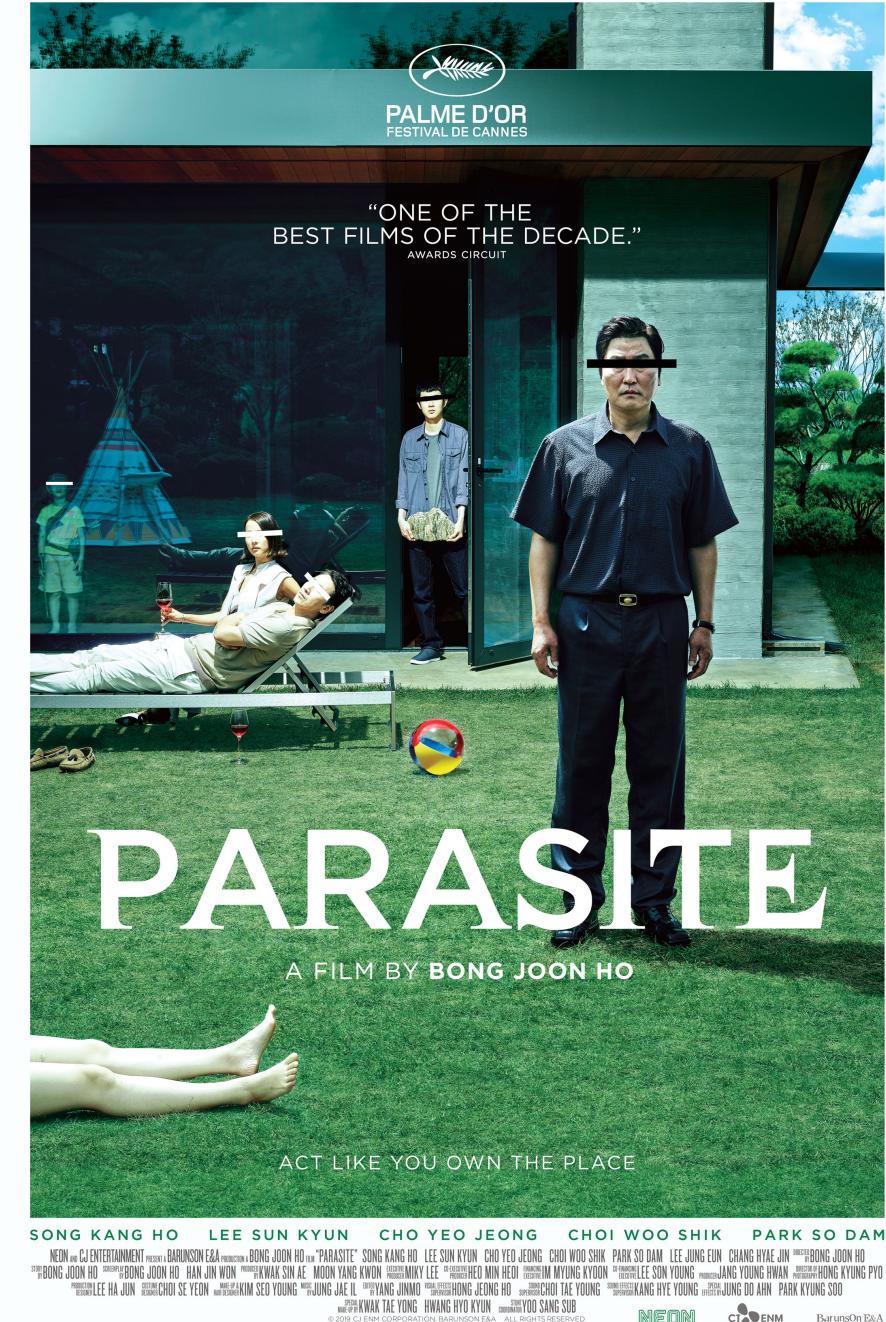
SONG KANG HO LEE SUN KYUN CHO YEO JEONG CHOI WOO SHIK PARK SO DAM
NEON CJ ENTERTAINMENT REBARUNSON E&A PROD BONG JOON HO "PARASITE" SONG KANG HO LEE SUN KYUN CHO YEO JEONG CHOI WOO SHIK PARK SO DAM LEE JUNG EUN CHANG HYAE JIN DONG JOON HO
PROD BONG JOON HO DIR BONG JOON HO HAN JIN WON KWAK SIN AE MOON YANG KWON PROD MKY LEE PROD HED MIN HEOL EXECUTIVE PROD TIM MYUNG KYOON EXECUTIVE PROD SON YOUNG DIRECTOR BONG JOON HO PROD JANG YOUNG HWAN PROD HONG PYO
WRITING BONG JOON HO PROD CHOI SE YEON WRITING KIM SED YOUNG EDIT JUNG JAE IL PROD YANG JINMO PROD HONG JAE IL PROD KANG HYE YOUNG EDIT JUNG DO AHN PARK KYUNG SOO
CINEMA LEE HA JUN PROD CHOI SE YEON WRITING KIM SED YOUNG EDIT JUNG JAE IL PROD YANG JINMO PROD HONG JAE IL PROD KANG HYE YOUNG EDIT JUNG DO AHN PARK KYUNG SOO
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PROPS KWAK TAE YONG HWANG HYO KYUN STYLING YOO SANG SUB
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Question

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Domestic success:

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



Data

- Box Office Mojo
- IMDB



Data

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- IMDB

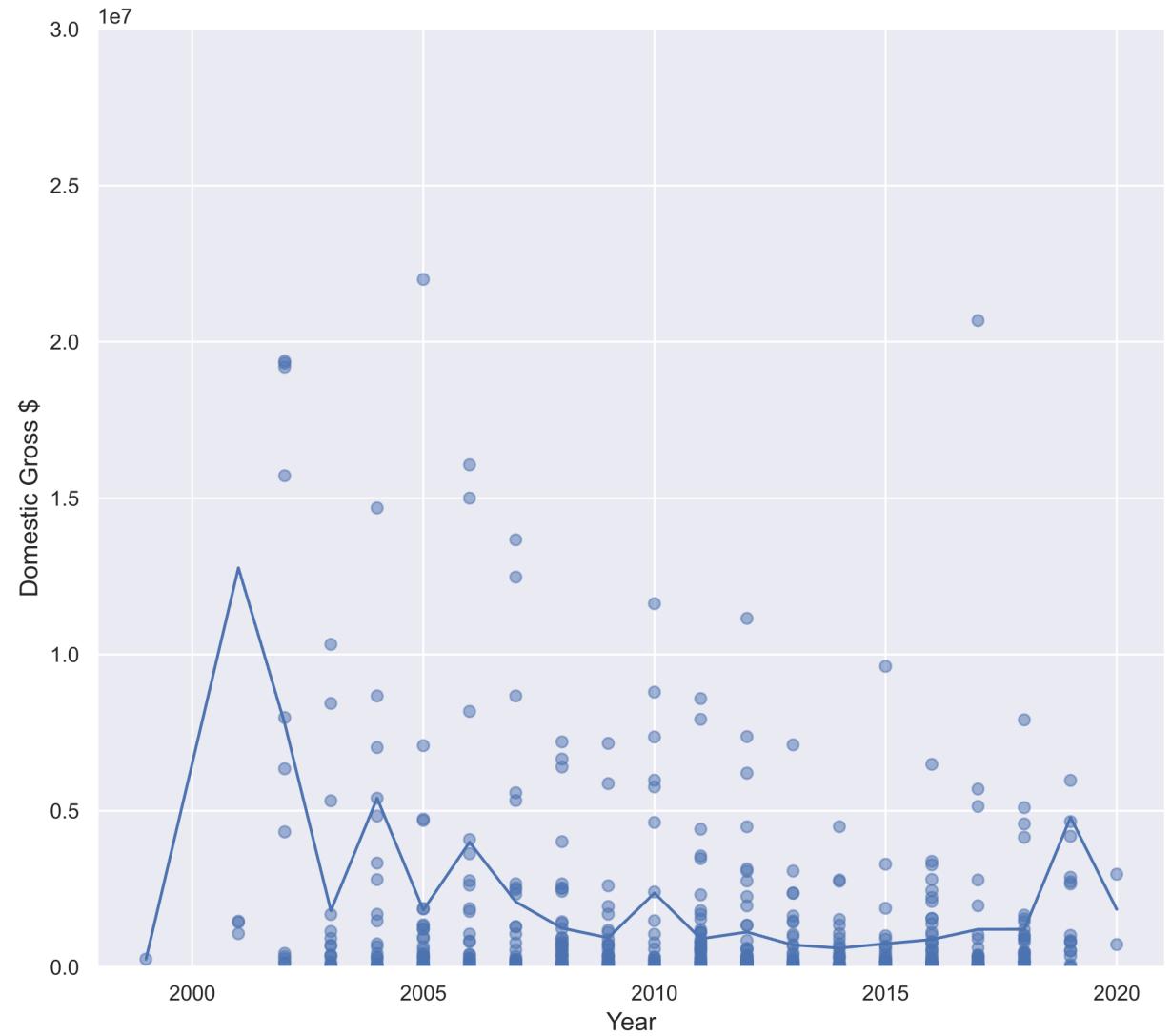
Tools

- Beautiful Soup
- Selenium
- Forex-Python
- CPI library
- Sklearn



Was Anthony Kaufman right?

Domestic Gross by Year

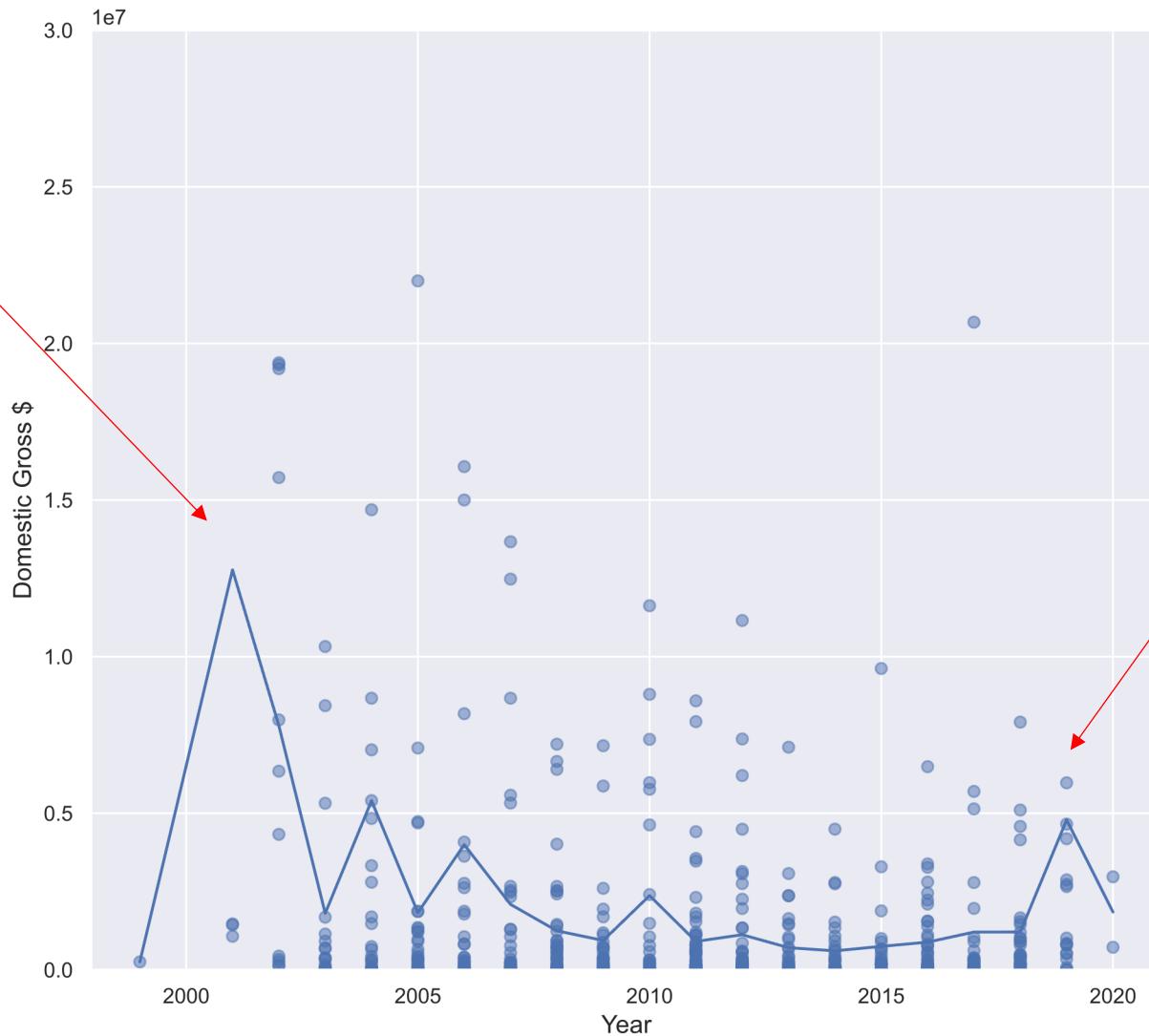


Domestic Gross by Year



Amélie
release year

Domestic Gross by Year

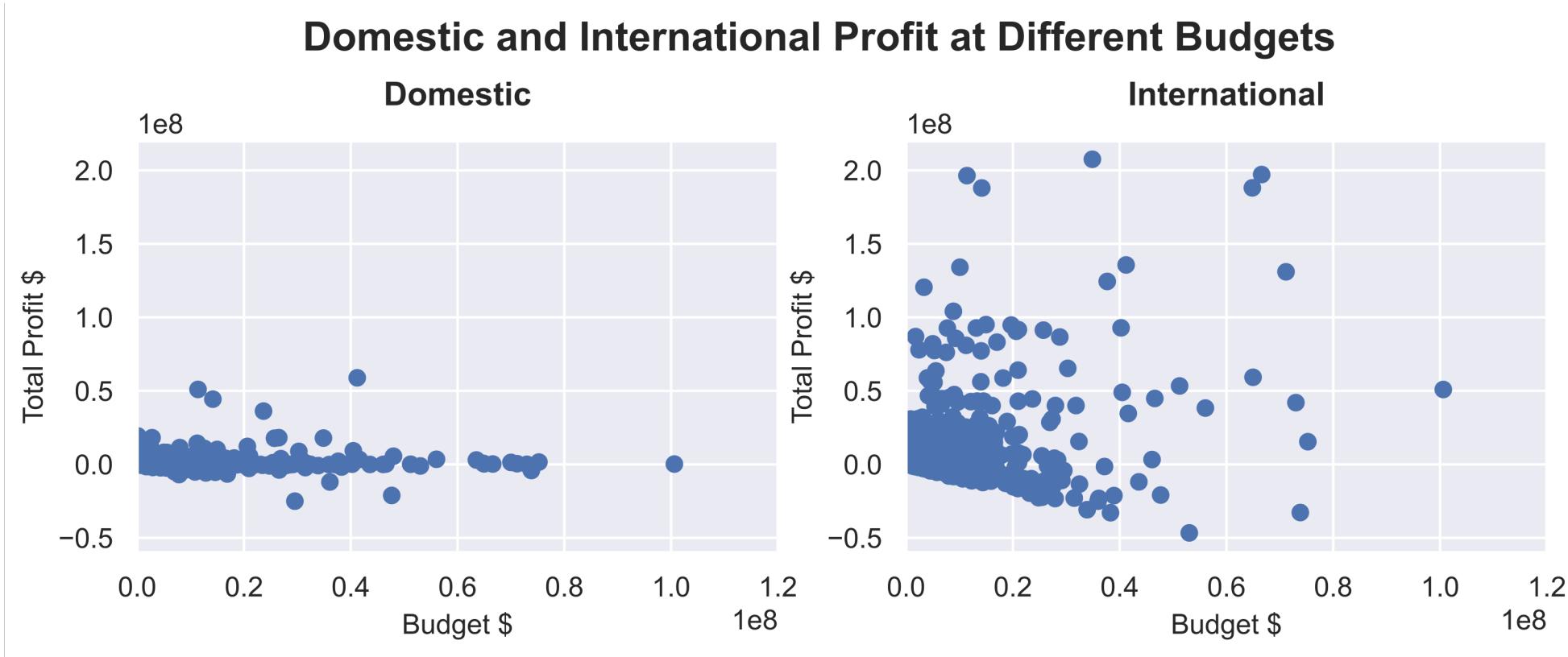


Parasite
release year

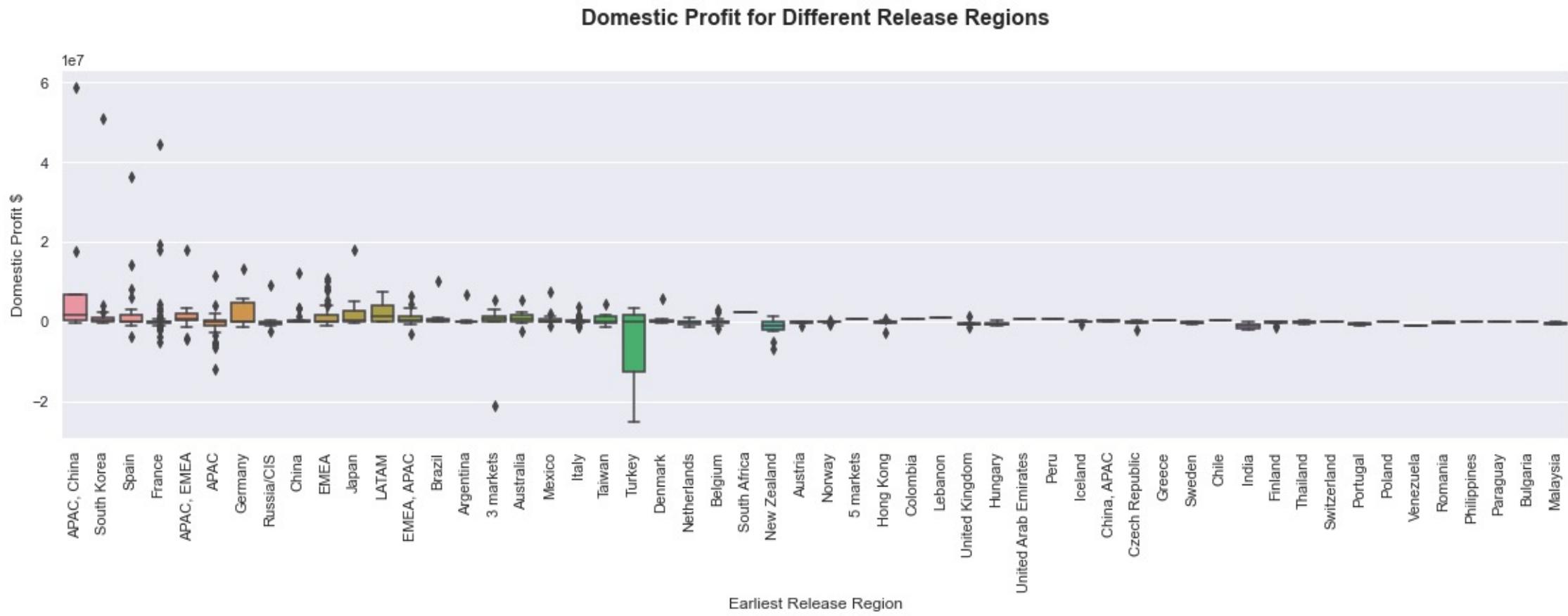
Initial Hypothesis

- Good predictors:
 - Budget
 - Earliest release region
 - Earliest release location gross

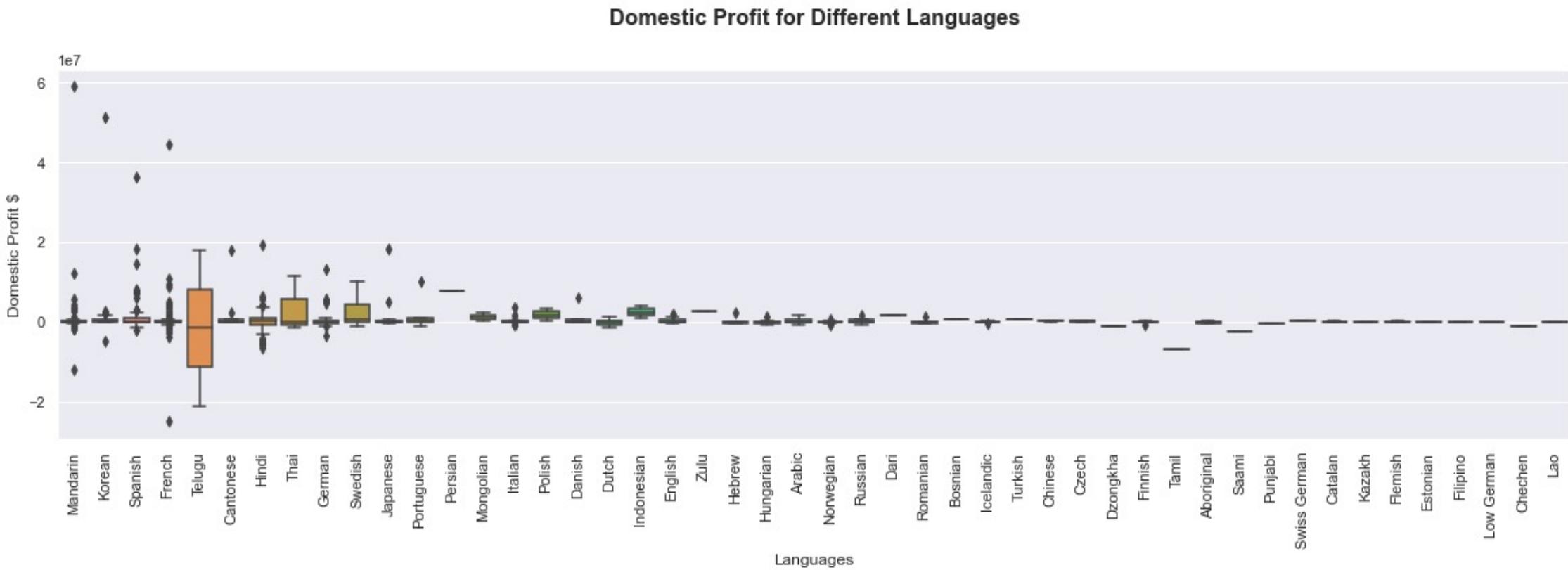
Curious Insights



Curious Insights



Curious Insights

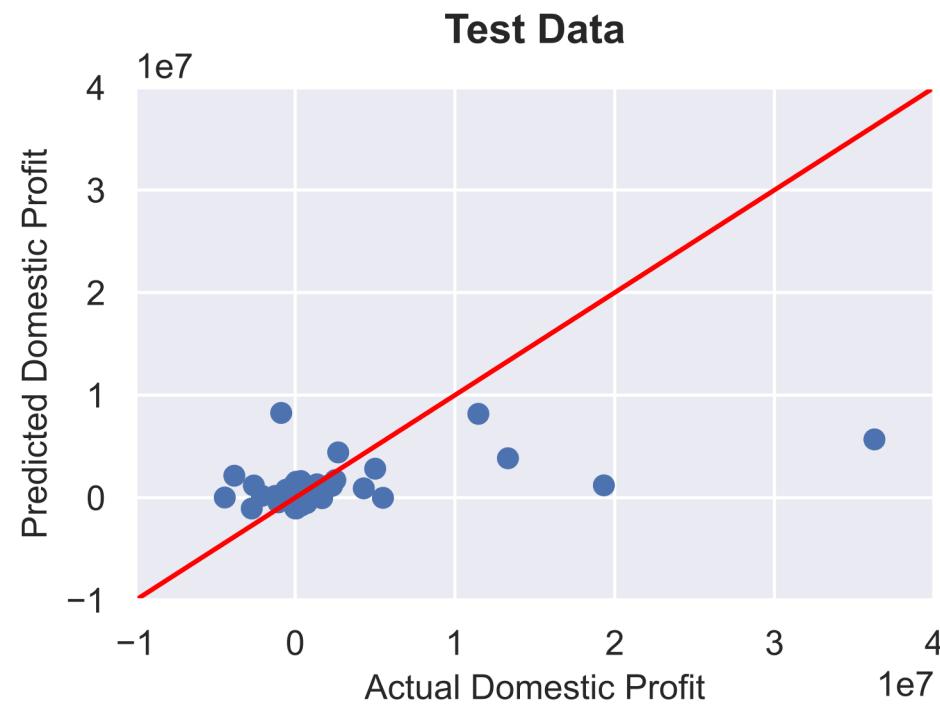


Model

- Ridge Regression
- Alpha = 0.01
- Features: domestic opening, maximum theaters * international profit, comedy, drama, romance, action, thriller, Miramax Sony Pictures Classic

Model performance

Actual vs. Predicted Domestic Profit



Model performance

- R2: 0.192
- RMSE: \$4,945,372
- MAE: \$1,917,993

Model performance

- R²: 0.192
 - RMSE: \$4,945,372
 - MAE: \$1,917,993
-
- Max domestic profit: \$58,920,620
 - Min domestic profit: -\$24,994,590

Conclusion

- Domestic success of foreign language films is hard to predict!

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- Budget does not appear to correlate with domestic success

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- Budget does not appear to correlate with domestic success
- Genre and domestic distributor more important