

FACTORS UNDERLYING DISNEY STUDIOS BOX OFFICE SUCCESS

Peter Gatto

A cartoon illustration of Mickey Mouse dressed as a wizard. He is wearing a tall, blue pointed hat with yellow stars and a crescent moon. He has a pink robe with a brown belt and is holding a large red funnel in his right hand. He is standing on a dark, textured surface against a dark blue background with white stars.

INTRODUCTION

ANATOMY OF A MOVIE

- Data from Box office mojo
- Scraping procedures
- Target variable:
Worldwide Gross
- Potential features



Black Panther

T'Challa, heir to the hidden but advanced kingdom of Wakanda, must step forward to lead his people into a new future and must confront a challenger from his country's past.

IMDbPro

[Cast information](#)
[Crew information](#)
[Company information](#)
[News](#)
[Box office](#)
[Brand rankings](#) ▾
[Franchise rankings](#) ▾
[Genre keyword rankings](#) ▾

Title Summary

Original Release ▾

Domestic ▾

Grosses

DOMESTIC (52%)

\$700,059,566

INTERNATIONAL (48%)

\$646,853,595

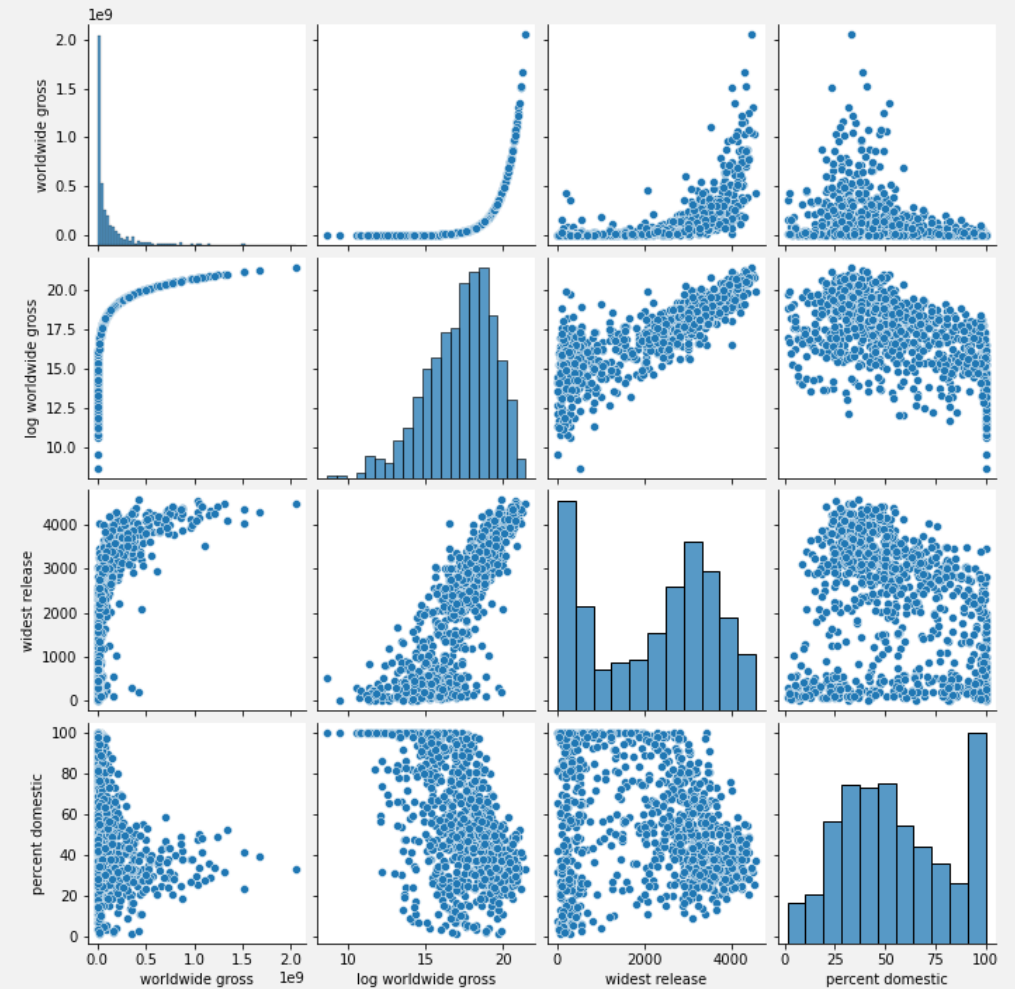
WORLDWIDE

\$1,346,913,161

Distributor	Walt Disney Studios Motion Pictures See full company information
Opening	\$202,003,951 4,020 theaters
Release Date	Feb 16, 2018 - Aug 9, 2018
MPAA	PG-13
Running Time	2 hr 14 min
Genres	Action Adventure Sci-Fi
In Release	319 days/45 weeks
Widest Release	4,084 theaters

METHODOLOGY

- Target Logarithmic Transformation
- Linear Regression Variable Choices
- Top Quantitative Predictors:
- Widest Release, Percent Domestic

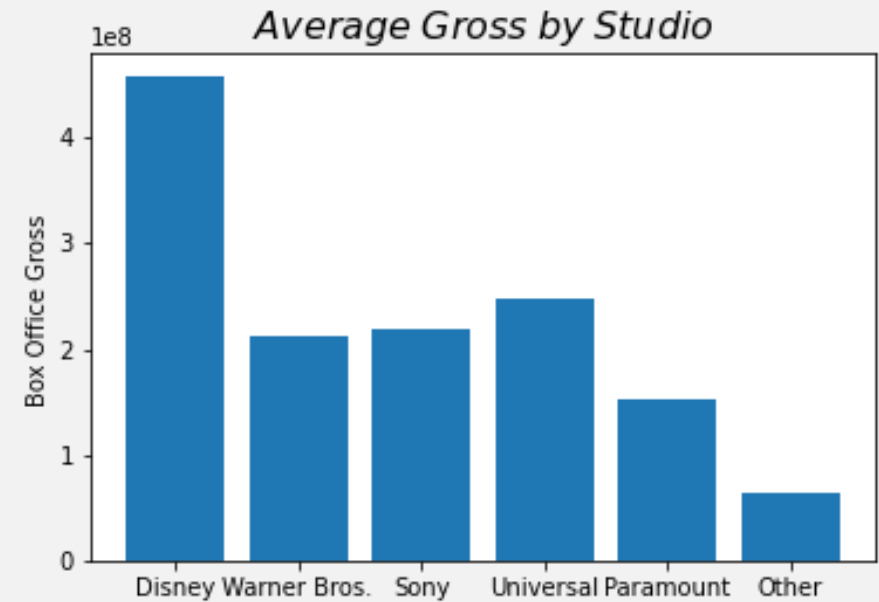


METHODOLOGY

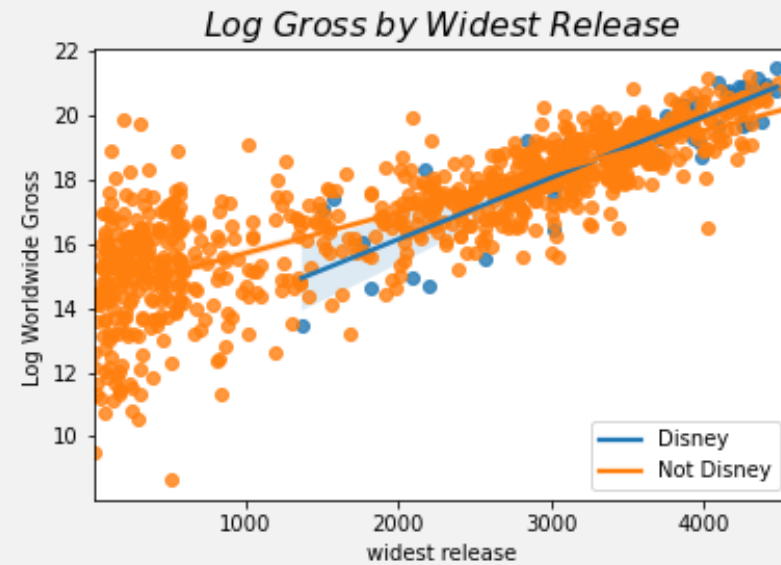
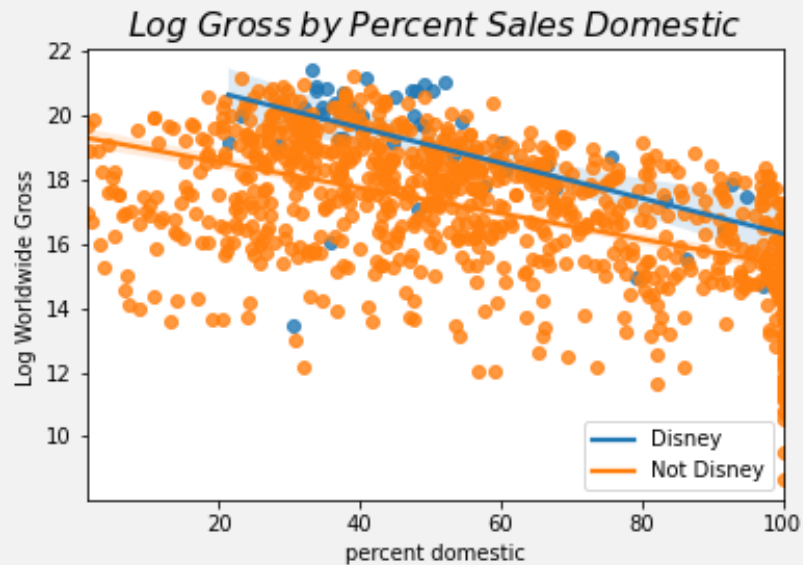
	worldwide gross	percent domestic	runtime (mins)	time in release	widest release	log worldwide gross
worldwide gross	1.000000	-0.337992	0.353235	0.088444	0.591019	0.656054
percent domestic	-0.337992	1.000000	-0.217808	-0.094413	-0.237477	-0.514321
runtime (mins)	0.353235	-0.217808	1.000000	0.079371	0.235835	0.286683
time in release	0.088444	-0.094413	0.079371	1.000000	0.045775	0.136767
widest release	0.591019	-0.237477	0.235835	0.045775	1.000000	0.829842
log worldwide gross	0.656054	-0.514321	0.286683	0.136767	0.829842	1.000000

WHY DISNEY?

- Considering categorical variables
- Walt Disney Studios significantly outperformed other major studios
- Predicts profitability for theaters

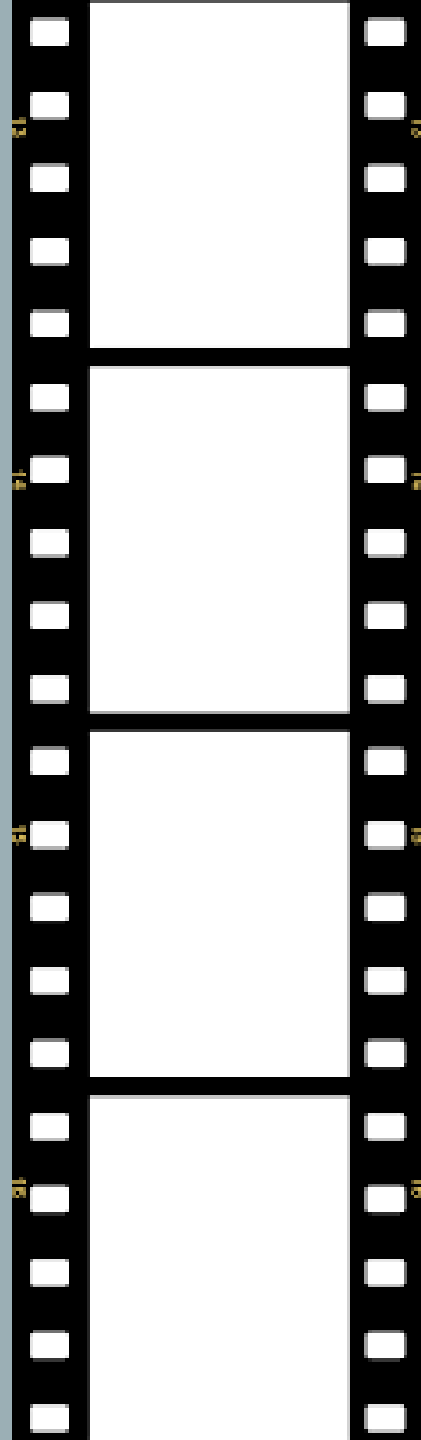


MODEL SELECTION: DISNEY AS A FACTOR?



CONCLUSIONS

- Reduced risk of failure for theaters
- $R^2 = 0.8048$
- $MSLE = 0.003$



APPENDIX

- Train / Validate / Test
- 60% / 20% / 20%
- Some other factors considered:

