

# The cake: Big enough?

**Can we predict it**



Roberto Linares

The problem:

How to choose what  
movies rights to  
acquire?

Solution:

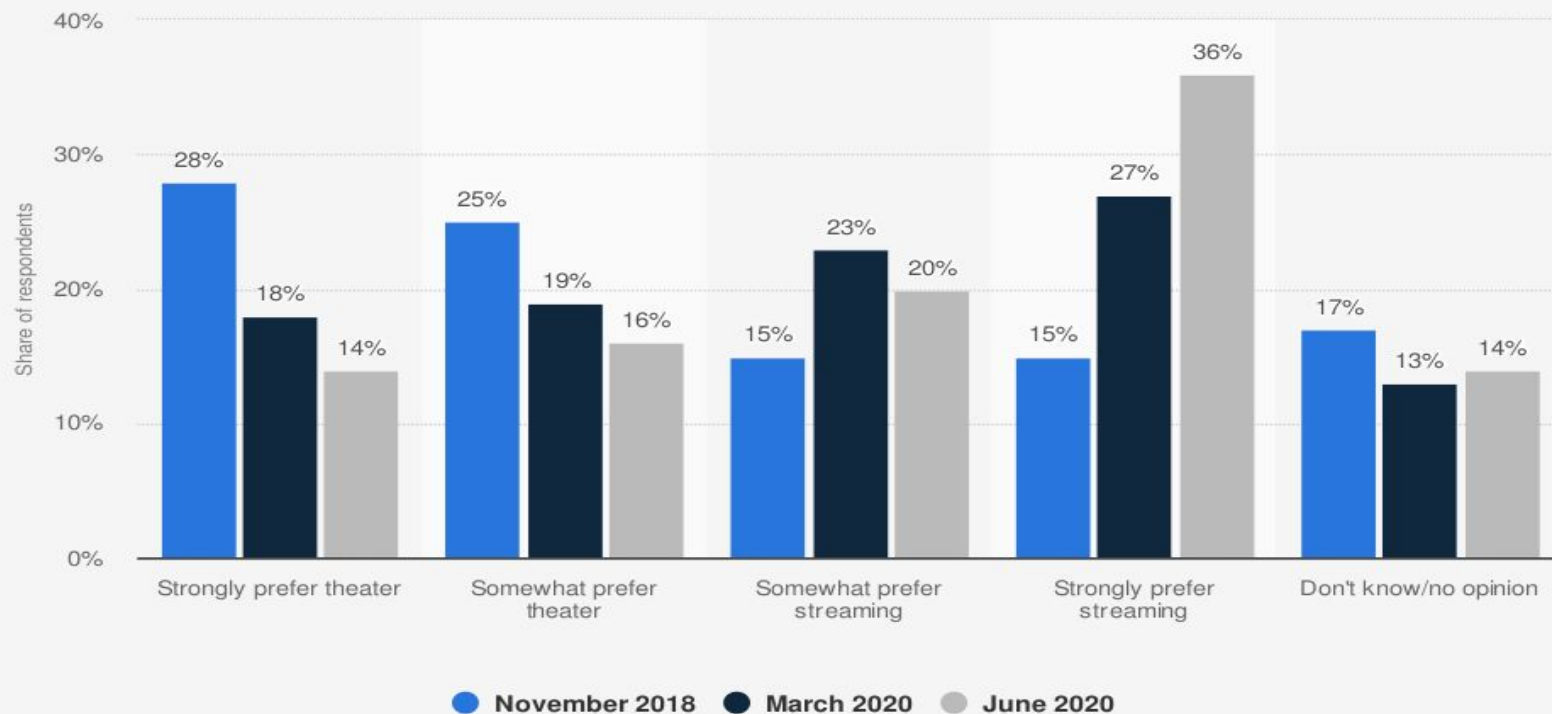
Let's unleash the  
power of data to help  
us find out.

**NETFLIX**

**VS**



## Preference for watching a movie for the first time at a theater instead of via a streaming service in the United States from November 2018 to June 2020



# The data



**Box Office Mojo**  
by IMDbPro

Search for Titles

IMDbPro

Facebook

Twitter

Domestic

International


Worldwide

Calendar

All Time

Showdowns

Indices



### Star Wars: Episode VII - The Force Awakens (2015)

As a new threat to the galaxy rises, Rey, a desert scavenger, and Finn, an ex-stormtrooper, must join Han Solo and Chewbacca to search for the one hope of restoring peace.


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

**Title Summary**

All Releases

<b>All Releases</b> DOMESTIC (45.3%) <b>\$936,662,225</b> INTERNATIONAL (54.7%) <b>\$1,132,859,475</b> WORLDWIDE <b>\$2,069,521,700</b>	Domestic Distributor	Walt Disney Studios Motion Pictures <a href="#">See full company information</a>
	Domestic Opening	<b>\$247,966,675</b>
	Budget	\$245,000,000
	Earliest Release Date	December 16, 2015 (EMEA, APAC)
	MPAA	PG-13
	Running Time	2 hr 18 min
	Genres	Action Adventure Sci-Fi
	IMDbPro	<a href="#">See more details at IMDbPro</a>

**Star Wars: The Force Awakens**



Theatrical release poster

Directed by J. J. Abrams

Written by Lawrence Kasdan  
J. J. Abrams  
Michael Arndt

**Cruella**



Theatrical release poster

Directed by Craig Gillespie

Screenplay by Dana Fox  
Tony McNamara

# How it looks like

Title	Domestic opening	Domestic total gross	Worldwide Gross	Budget	Runtime	Rating	Release date	Distributor	Genre
Avatar	77025481	760507625	2847246203.00	237000000.00	162.00	PG-13	December 16, 2009	Twentieth Century Fox	Action Adventure Fantasy...
Avengers: Endgame	357115007	858373000	2797501328.00	356000000.00	181.00	PG-13	April 24, 2019	Walt Disney Studios Motion Pictures	Action Adventure Drama ...

Linear Regression

Ridge

$R^2$

Comparison

MAE

For results

# LASSO



# Results

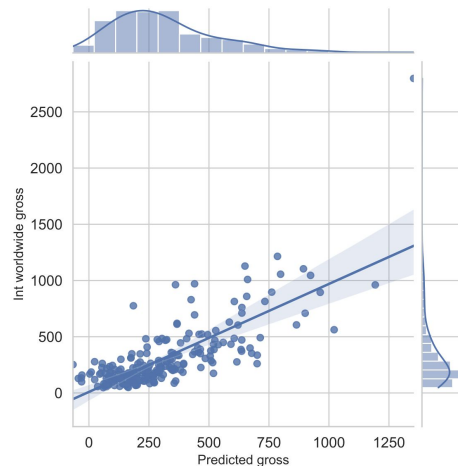
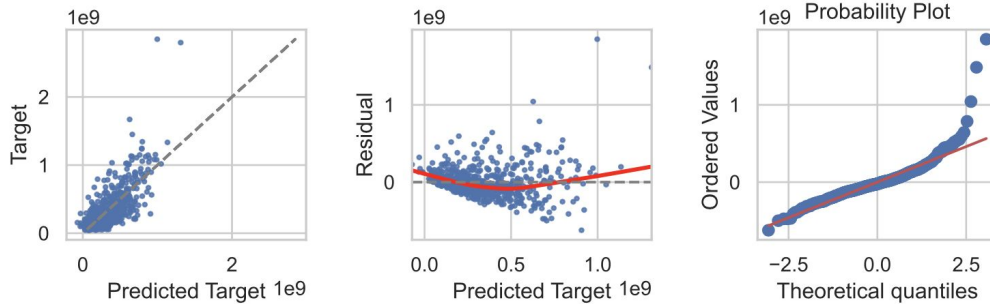
R squared = 0.44

**Lasso**

**R squared = 0.54**

**MAE = 130M**

LinearRegression approach





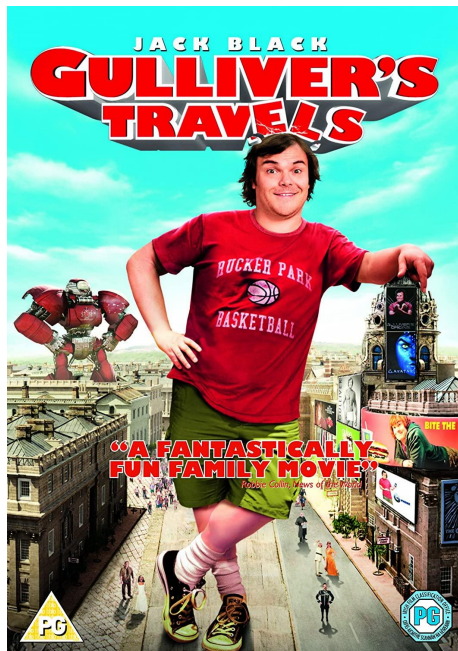
# Model predictions



Pred = 762 M

Real = 896 M

Diff = 134 M



Pred = 318 M

Real = 237 M

Diff = 81 M

# Key takeaways

- Budget is the feature most related with the predicted goal.
- PG-13 rated films will outperform the rest.
- Most profitable genres are:
  - Animation, adventure, family, music or musical and last but not least, horror.

# Future Work

- Increase the amount of data and features (consider director and lead cast).
- Include the factor of the seasonality of movies.
- Consider the trend of streaming/theaters releases.