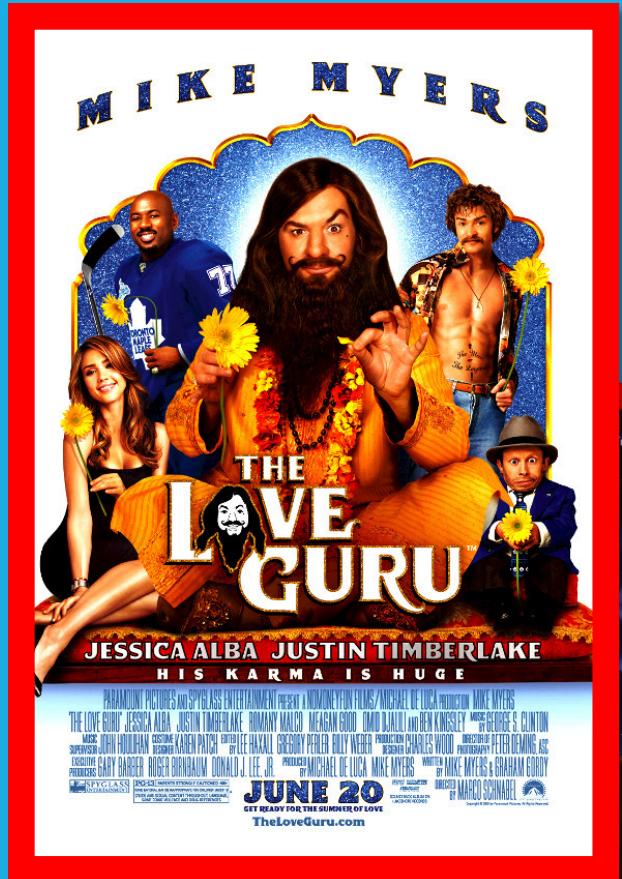




How Good Will Your Movie Be?

Predicting IMDb Movie Ratings
Joe Cowell



SCRAPING IMDb FOR MOVIE DATA

9/10

- 1,107 Movies between 2000 and 2020
 - Must have over 1,500 raters on IMDb
 - Must have a *budget* over \$1,000
 - Used information available prior to release



FEATURES INCLUDED IN THE MODEL

BUDGET

MPAA
RATING

RUNTIME

WRITER

STARS

YEARS SINCE
RELEASE

GENRE

PRODUCTION
CO.

DIRECTOR

RELEASE
MONTH

DUMMY VARIABLE FEATURES

BUDGET

MPAA
RATING

RUNTIME

WRITER

STARS

YEARS SINCE
RELEASE

GENRE

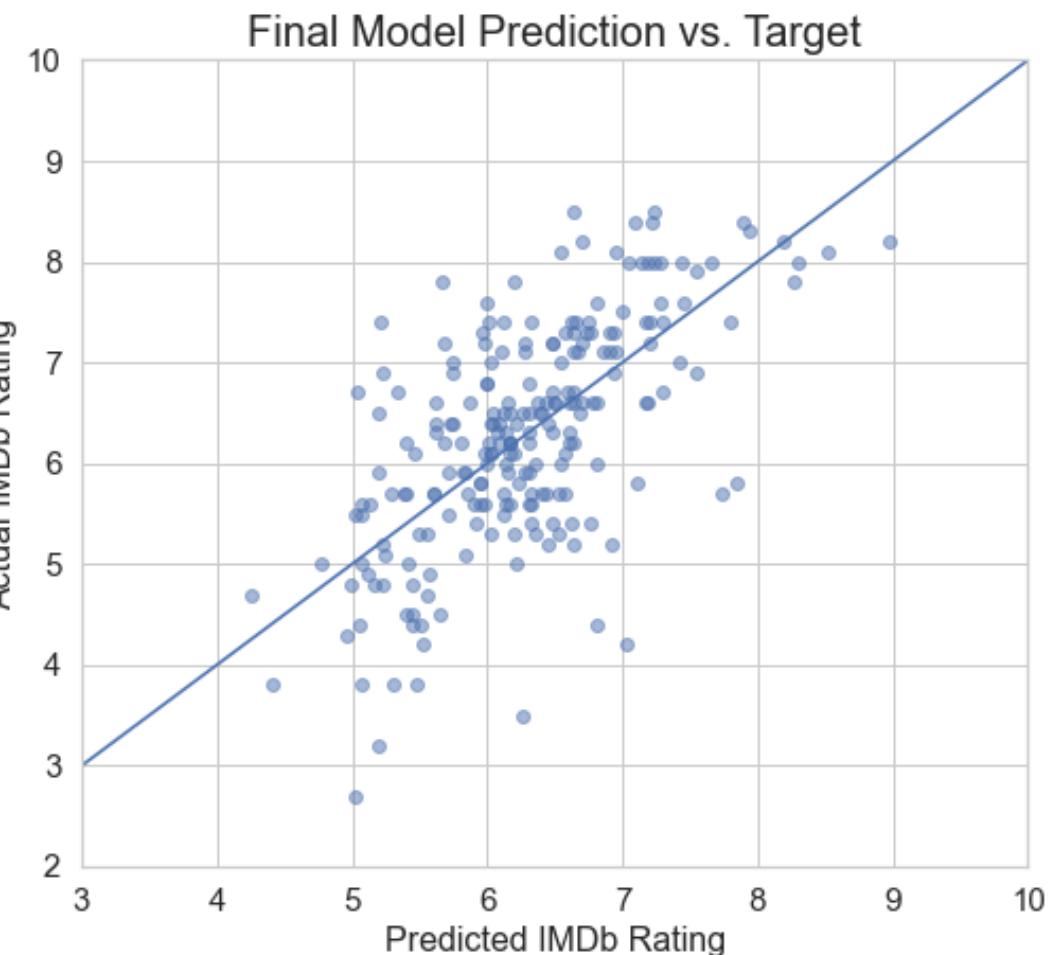
PRODUCTION
CO.

DIRECTOR

RELEASE
MONTH

RIDGE REGRESSION MODEL

- $R^2 = 0.41$ (not bad₁)
- $MAE = 0.65$
- Features are scaled for easy comparison



RUNTIME IS IMPORTANT!

Runtime

Min: 54 min.
Max: 209 min.
Mean: 108 min.

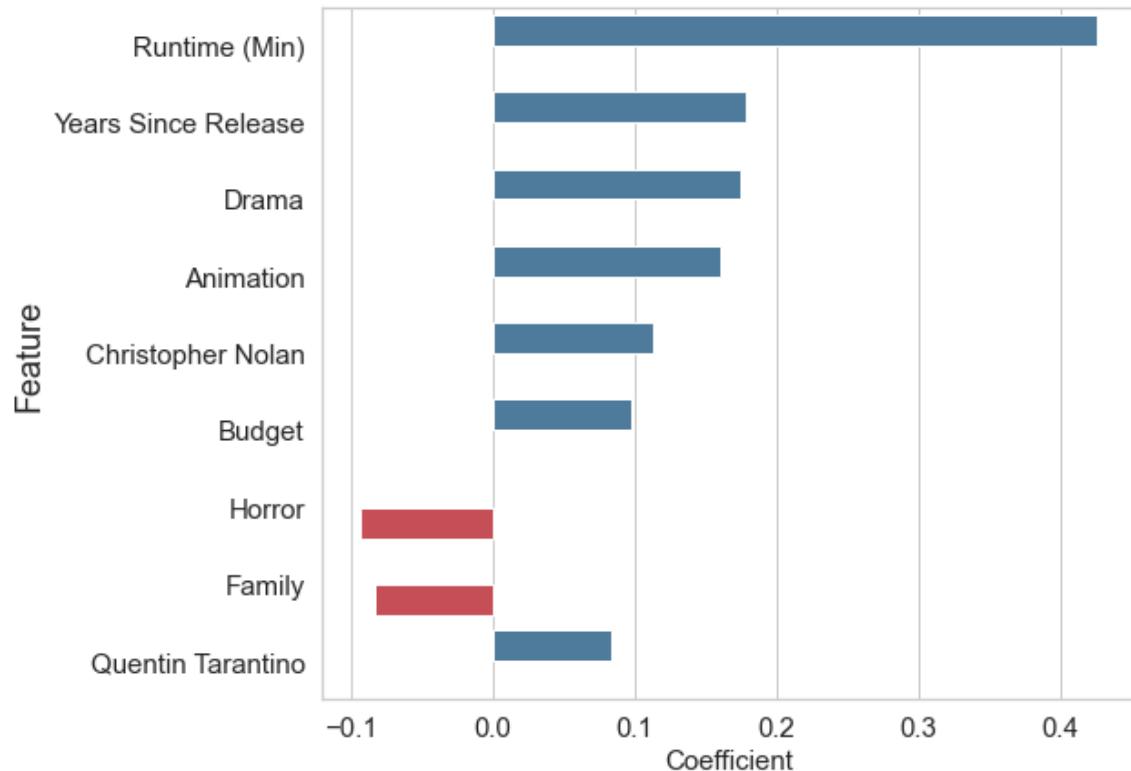
Genres

Drama
Animation

Writer

Christopher Nolan
Quentin Tarantino

Top 10 Important Features for IMDb Rating

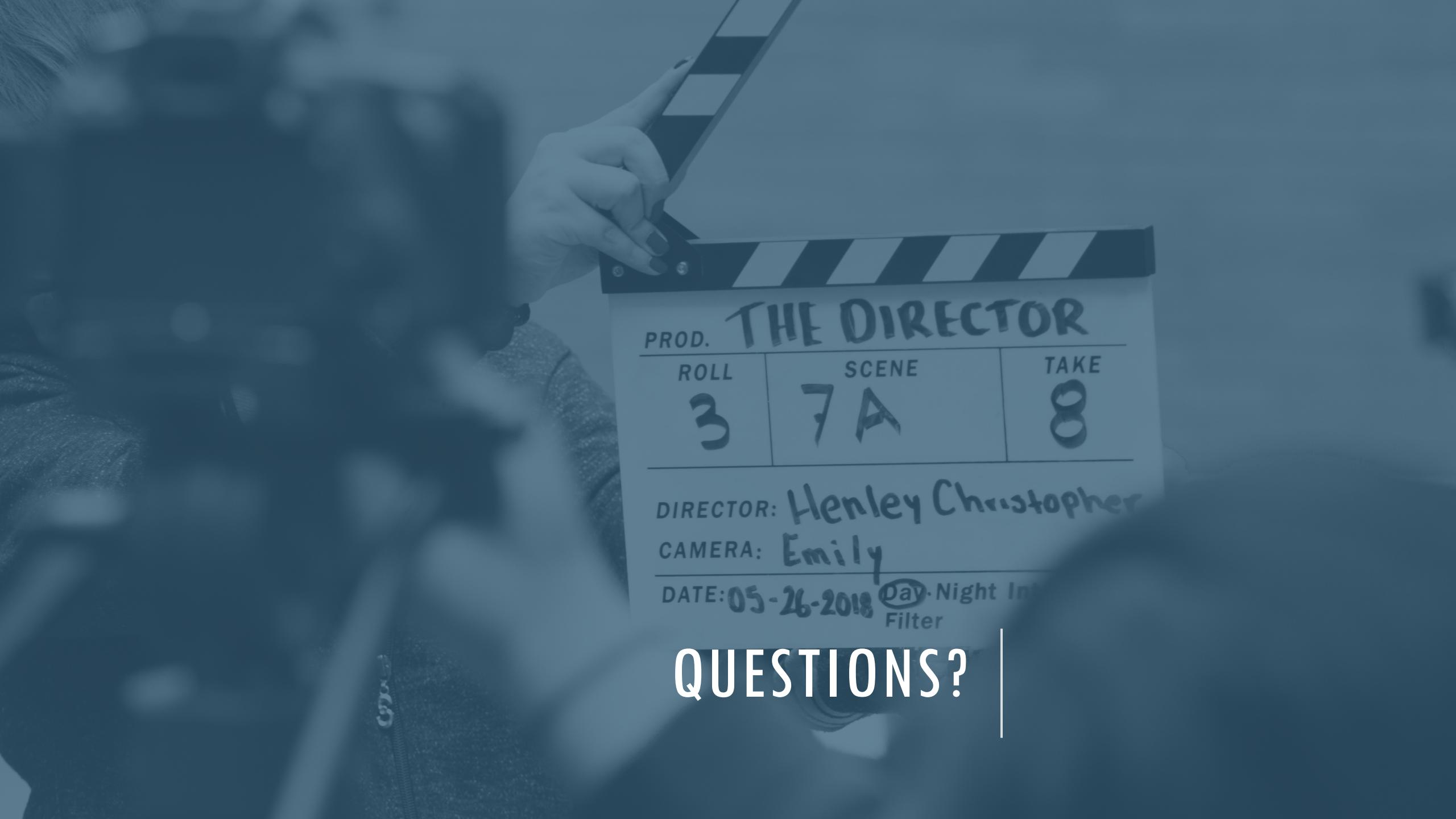


Director	Guy Ritchie
Writer	Christopher Nolan
Star	Matt Damon
Production Co.	Blumhouse Productions
Genre	Drama
MPAA	PG
Release Month	November
Runtime	Over 108 min.

THE PERFECT COMBINATION (CONCLUSION)

FUTURE WORK:

Create a secondary model to see how ratings could be influenced by Opening Weekend information.



PROD. THE DIRECTOR

ROLL

3

SCENE

7A

TAKE

8

DIRECTOR: Henley Christopher

CAMERA: Emily

DATE: 05-26-2018 Day-Night Int'l
Filter

QUESTIONS? |

APPENDIX: WORKS CITED

1. How to interpret R-squared in Regression Analysis by Jim Frost
(<https://statisticsbyjim.com/regression/interpret-r-squared-regression/>)

Are Low R-squared Values Always a Problem?

No! Regression models with low R-squared values can be perfectly good models for several reasons.

Some fields of study have an inherently greater amount of unexplainable variation. In these areas, your R^2 values are bound to be lower. For example, studies that try to explain human behavior generally have R^2 values less than 50%. People are just harder to predict than things like physical processes.

APPENDIX: DIAGNOSTIC PLOTS

