



THE BLOCKBUSTER GOES ABROAD

**METIS FALL 2020
JULIA QIAO**

Which features matter in the model?

Domestic Opening

Year

Distributors

Foreign Markets

Genres

MPAA Rating

Adaptation

Sequel

Reviews



Domestic Opening

Year

Year X Comedy

Disney X Adaptation

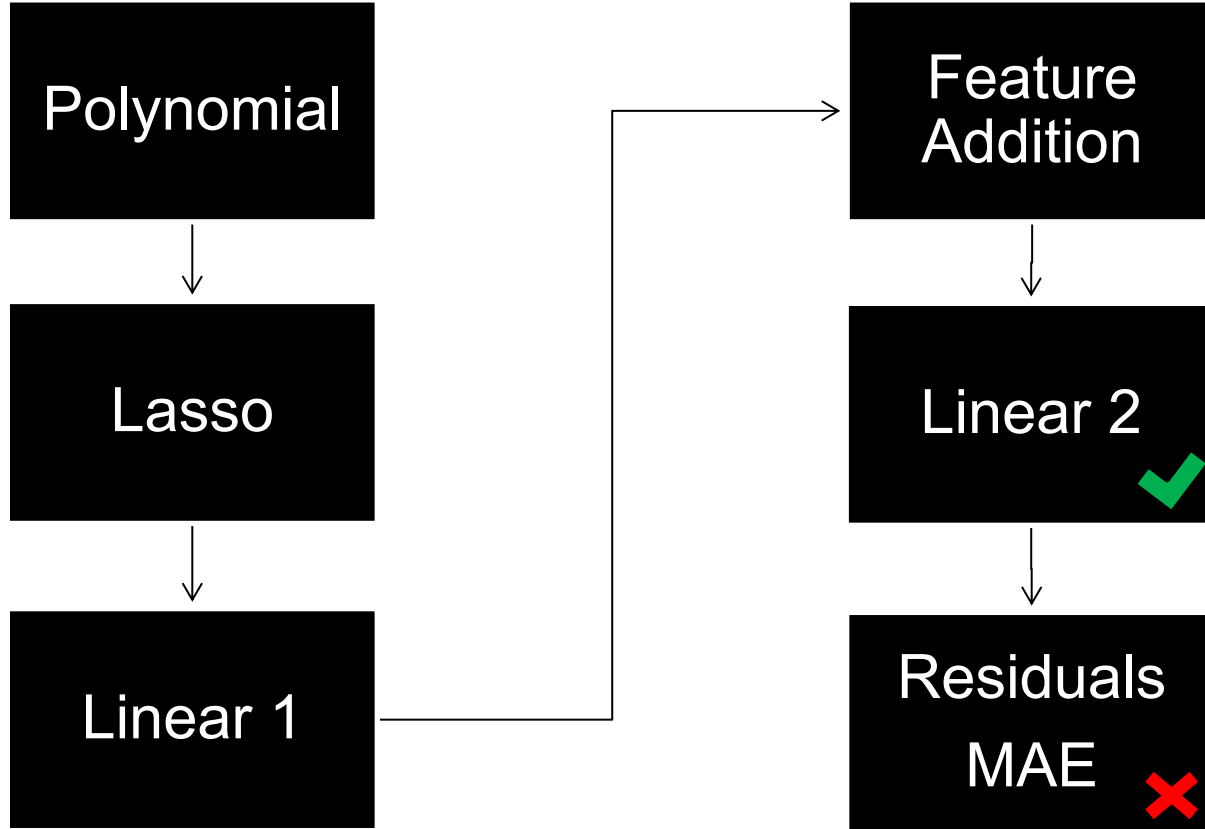
Disney X Foreign Markets

Sequel X Action

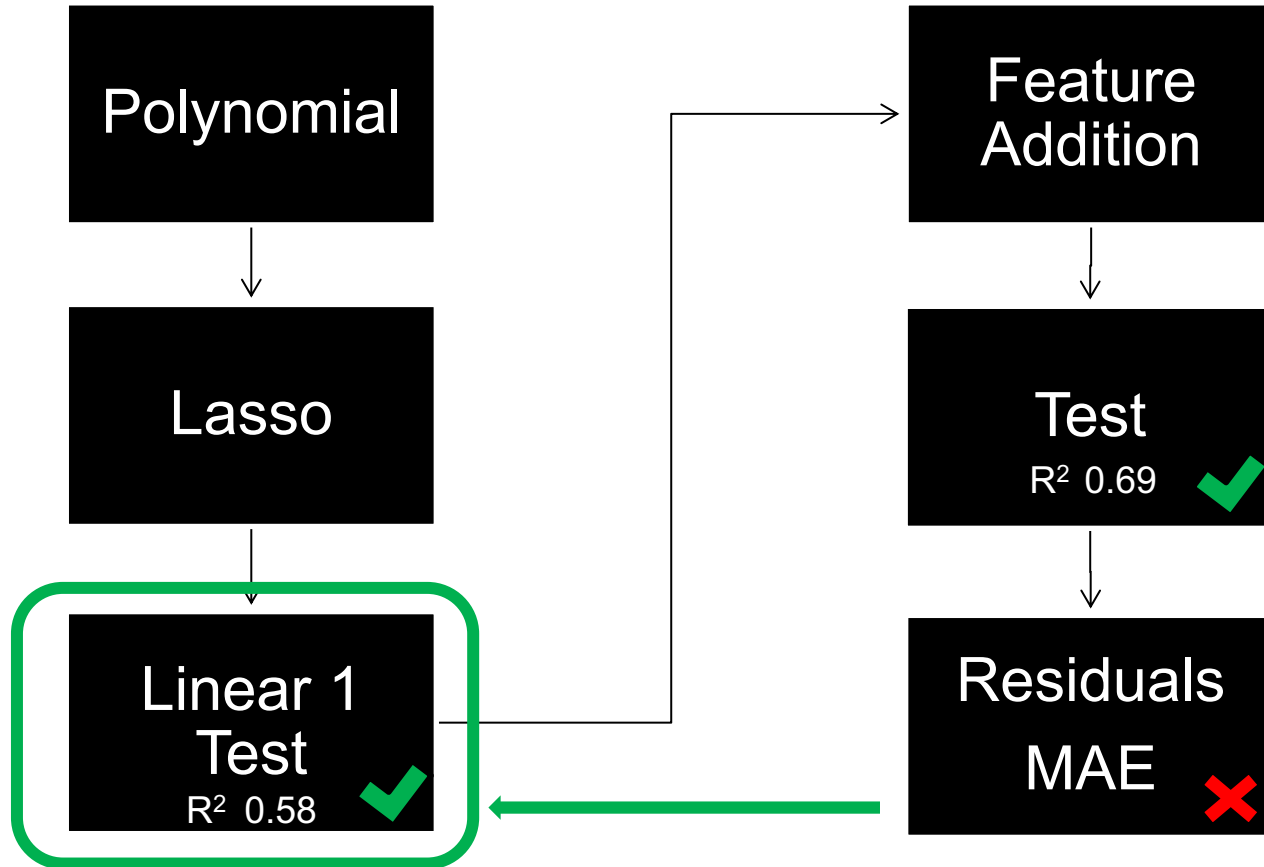
Sequel X Adventure

Action X PG13

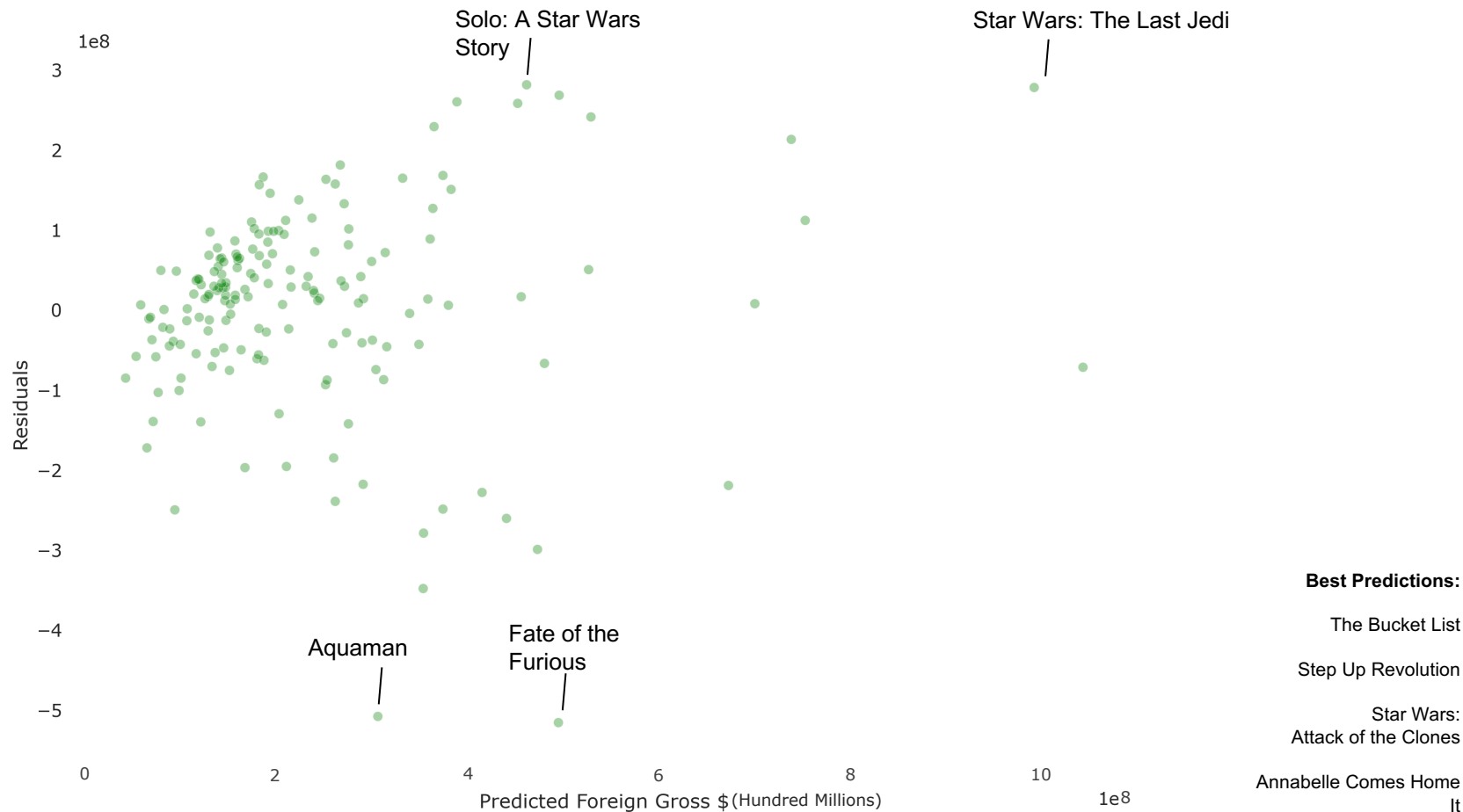
Regression workflow

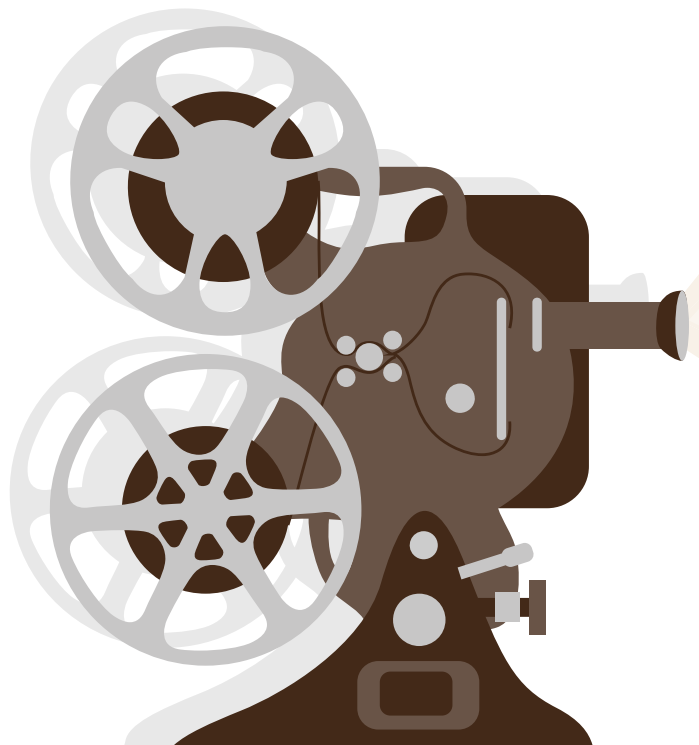


Regression workflow



Residuals: where are we over or under predicting?





THANK YOU!

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APPENDIX

Detailed regression workflow

Polynomial

R^2 : 0.53

Train/Test: 1.14

Slightly overfit

Lasso

R^2 : 0.56

Train/Test: 1.12

No major improvement

Linear

R^2 : 0.74

Train/Test: 0.74

Major improvement
Underfitting

Feature Addition

R^2 : 0.75

Train/Test: 0.95

Ready to test

Test

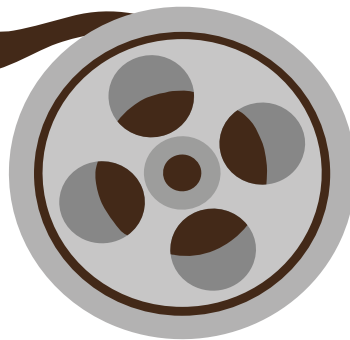
R^2 : 0.69

Train/Test: 9.12

Residual Plot

MAE

Model wasn't well fit or effective



Residual plot of model with extra features

