

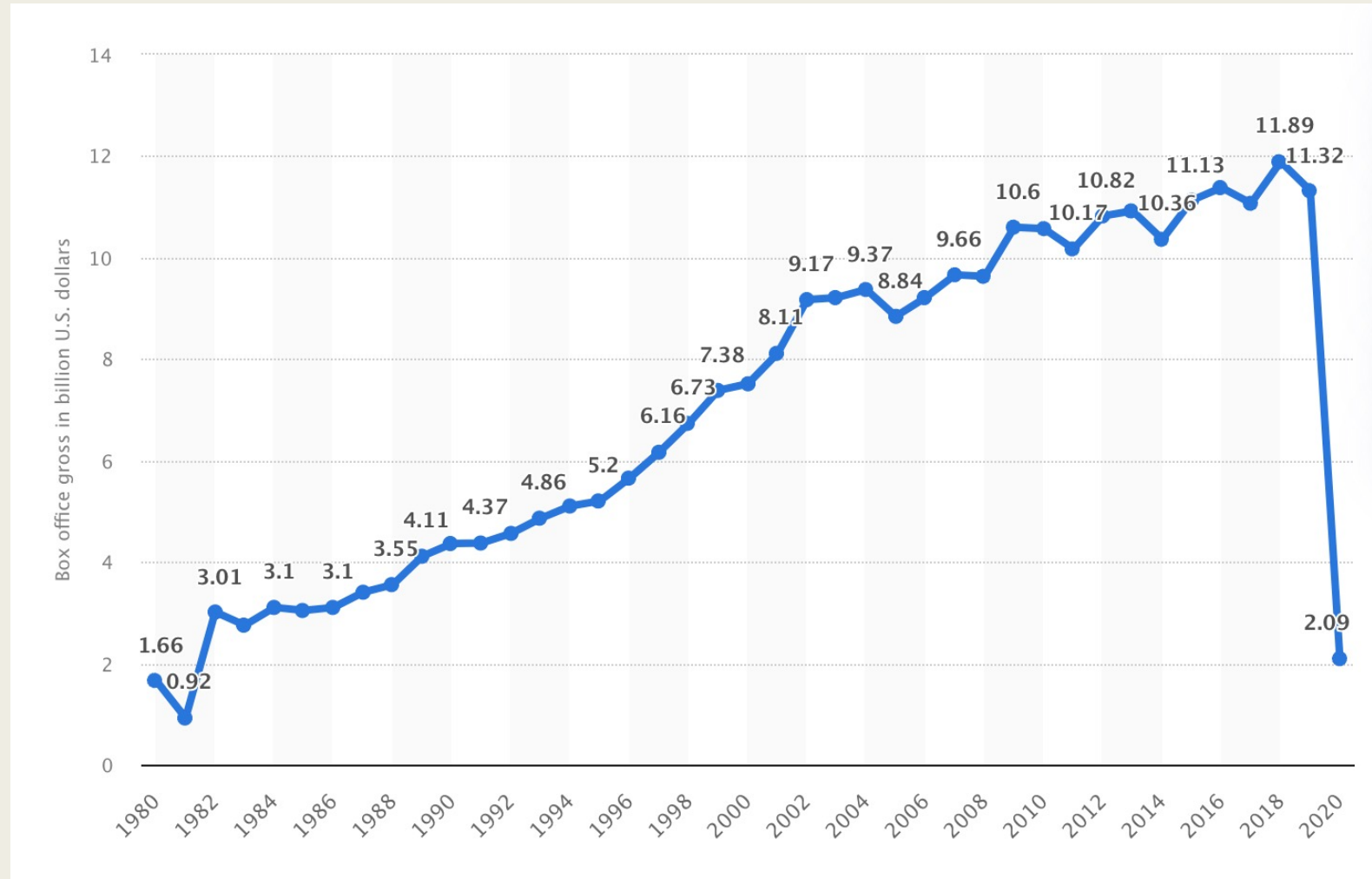


LINEAR REGRESSION MOVIE ANALYSIS

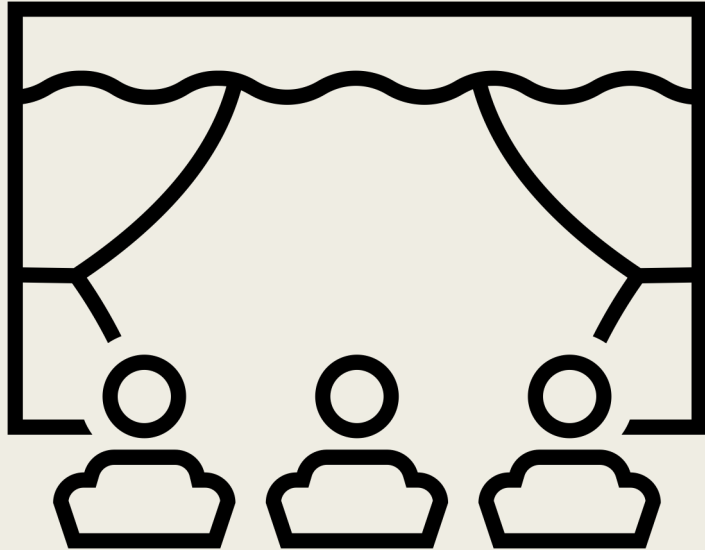
Predicting Box Office Profit



Motivation



Modeling Methodology



Objective: Predict global box office profit based on pre-release features

- $Profit = World\ Gross - Movie\ Budget$

Features:

- Movie Budget
- Rating
- Run time
- Release year

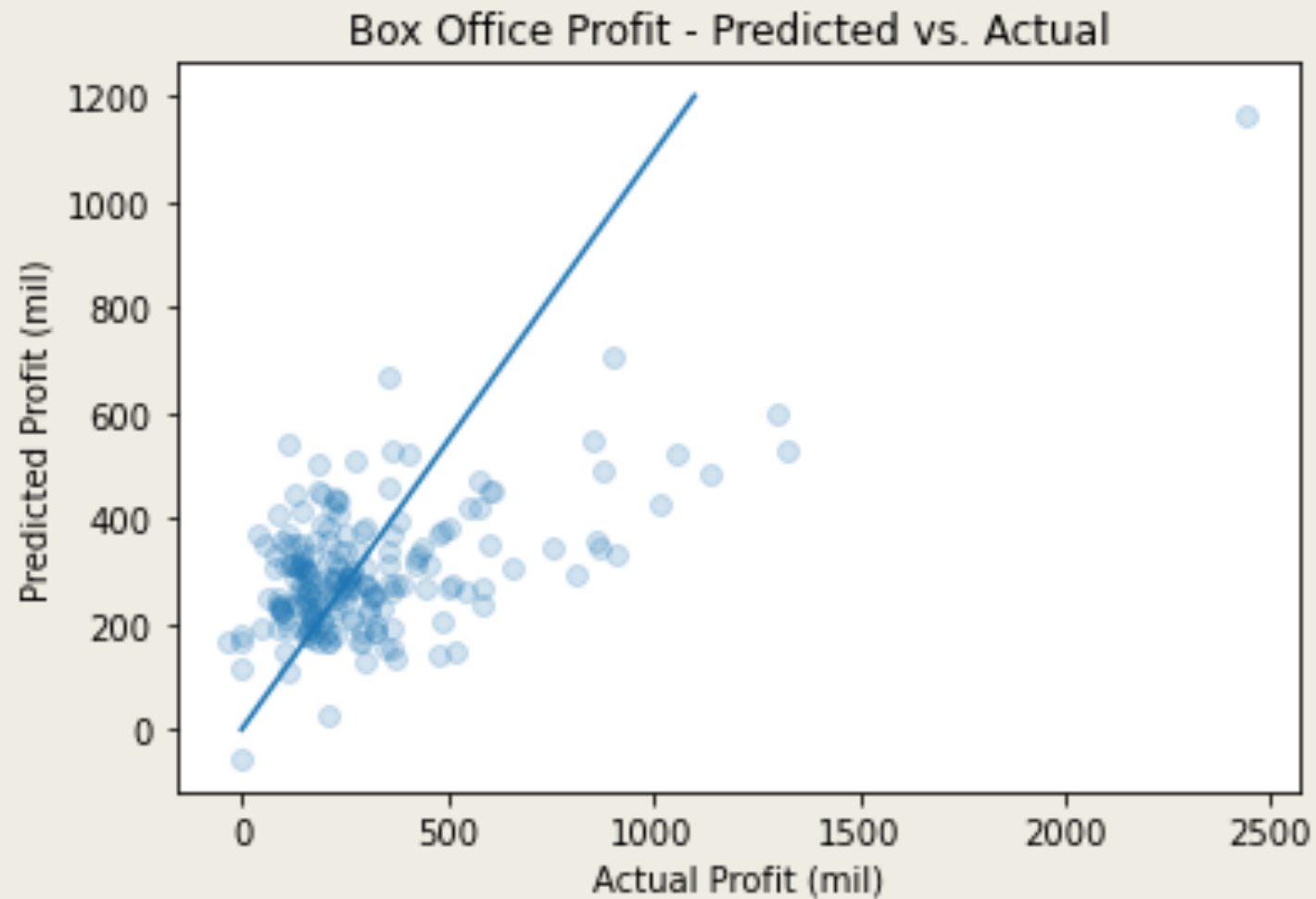
Data

- Web-scraped from BoxOfficeMojo.com
- Top 1000 box office gross
- Release date range: 1937-2021

The logo for Box Office Mojo by IMDbPro is displayed on a dark gray rectangular background. The text "Box Office Mojo" is in a large, bold, sans-serif font, with "Box Office" in white and "Mojo" in a bright blue color. Below this, the text "by IMDbPro" is written in a smaller, white, sans-serif font.

Box Office Mojo
by IMDbPro

Results



$R^2 : .349$

Target Sensitivity to Features

Run time

Release Year

Rating

Budget



Most sensitive

Least sensitive

Future Work

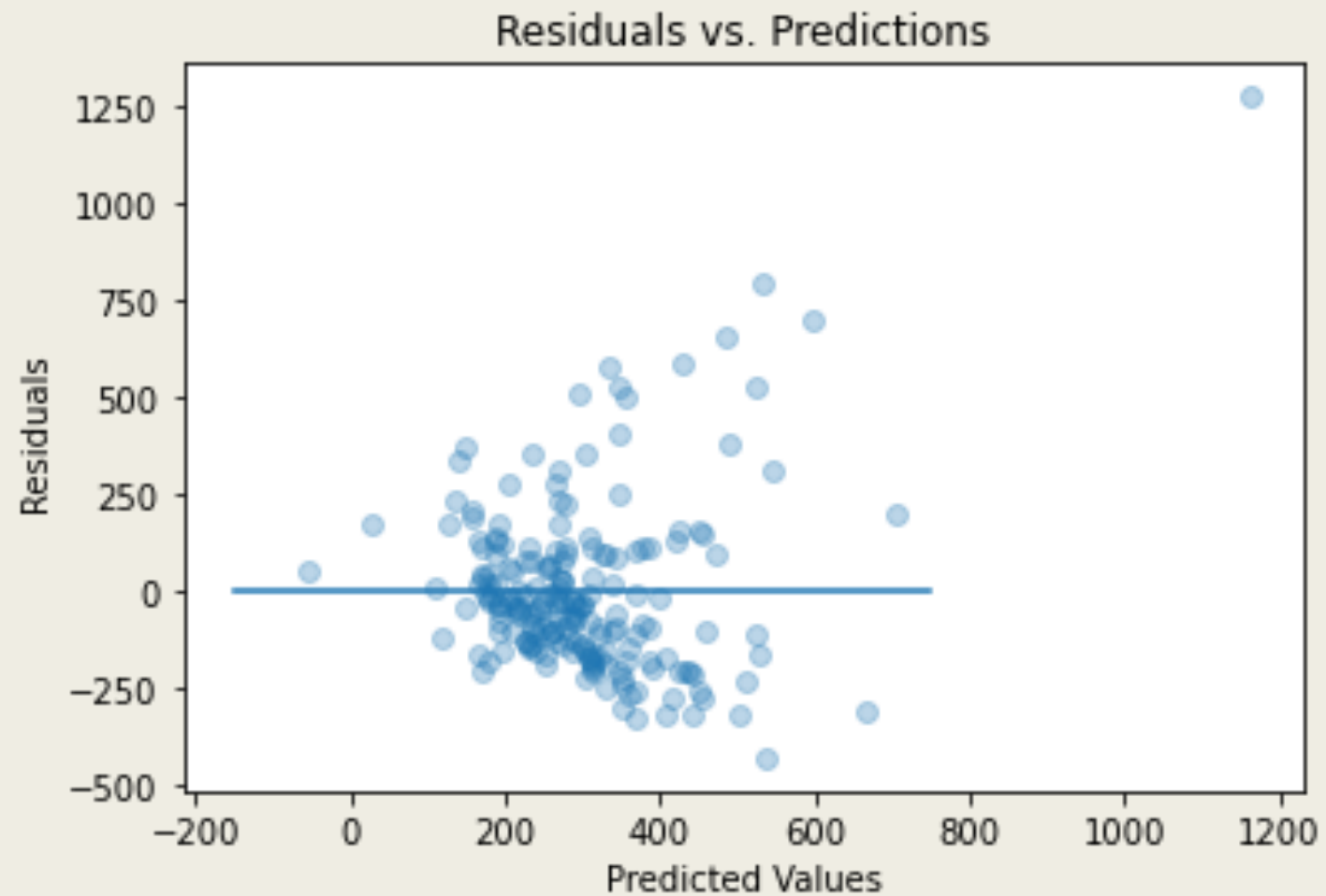
- Determine portion of box office gross retained by production company to gather more accurate measure of profit
- Explore additional pre-lease features to make model more robust
 - Cast, crew, distributor
- Consider the predictive ability of post-release features on movie profit
- Analyze features in the context of streamed version of movies



The End

A classic Looney Tunes-style title card. The background consists of several concentric red circles that create a tunnel-like effect, drawing the eye towards the center. In the middle of these circles is a solid black circle. Overlaid on this black circle is the text "The End" in a white, elegant, cursive script. The overall aesthetic is reminiscent of mid-20th-century animation.

Appendix



Appendix

