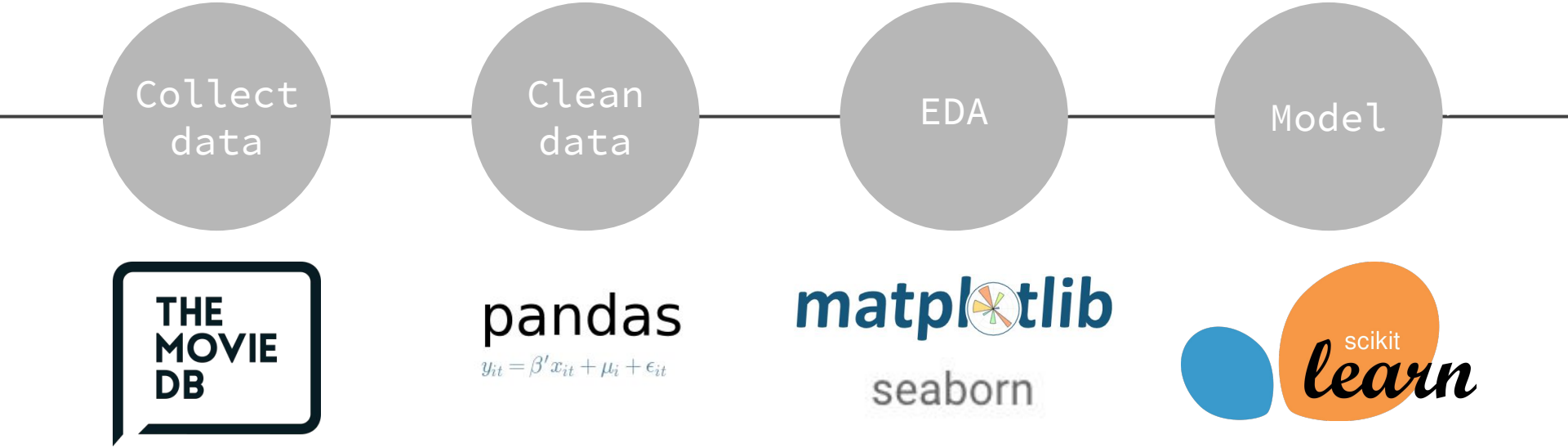
Predicting Film Success

Ryan Rappa

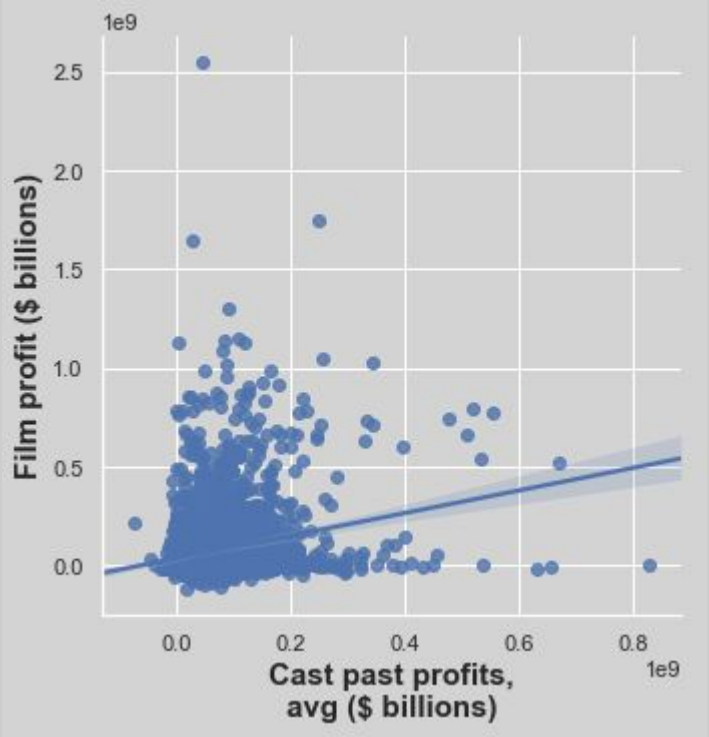
About me / my project

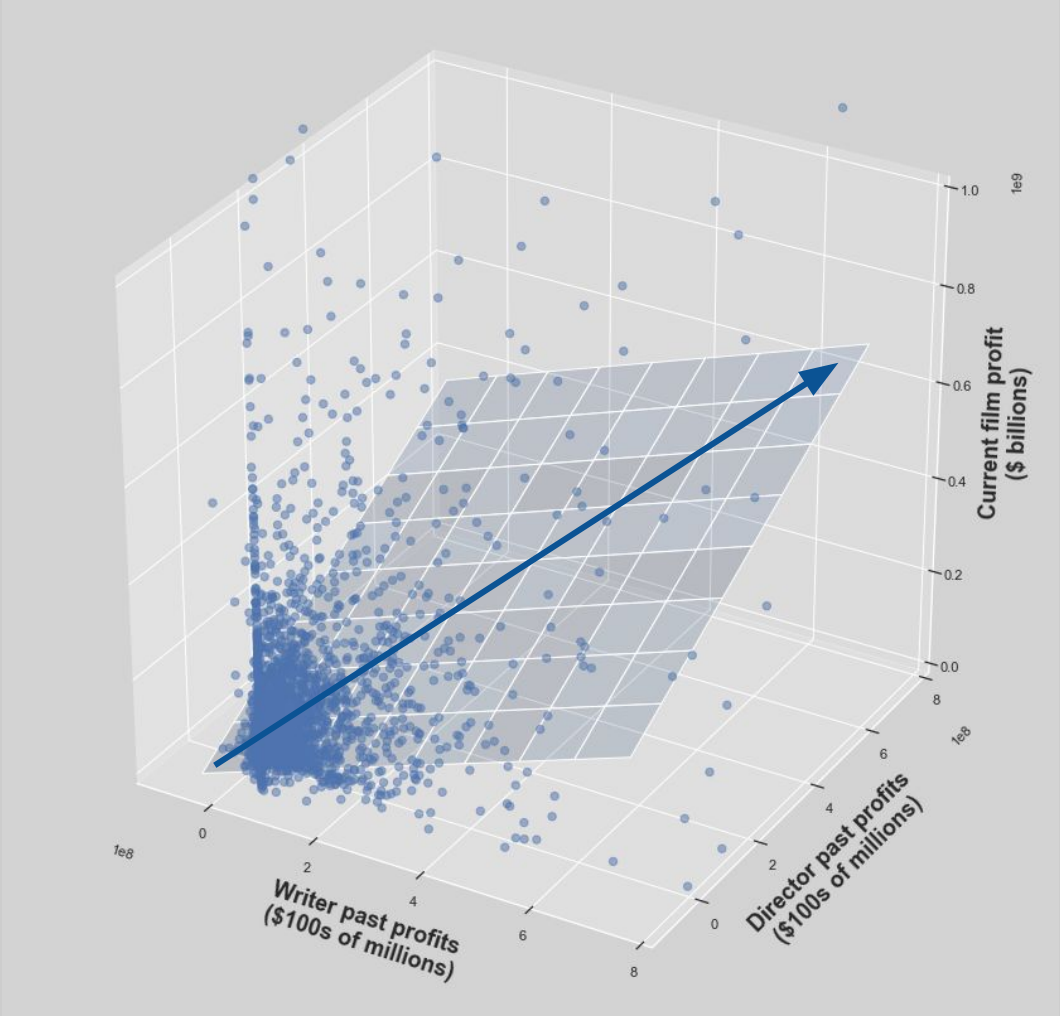
- **Political scientist/economist, former stats teacher**
- **Lived in NY, London, Abu Dhabi**
- **Interested in film and entertainment industry**
- **Project: predict whether a film is profitable**

Project workflow



Visualizing the data



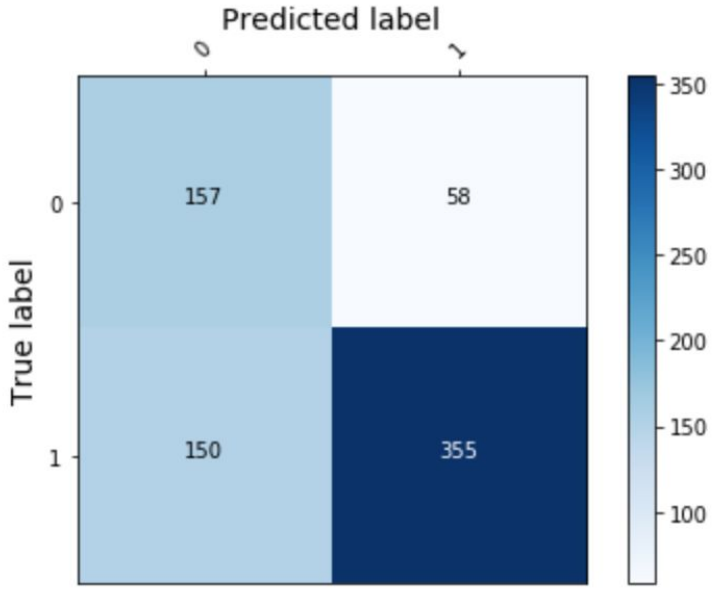


Findings

- **Major predictors of success:**
  - Number of int'l releases
  - Director past success
  - Cast past success
  - Budget and "adjusted budget"
  - Competing films: cast, director, writer, budget
  - Season (avoid Aug-Oct)
  - Runtime
- **Can predict with 71% accuracy and 86% precision -->**
- **Some unprofitable films are being misclassified** (top right square)

Prediction results

Gradient boost w/ 70% decision boundary:



Accuracy = 0.711
Precision = 0.860
Recall (TPR) = 0.703
Fallout (FPR) = 0.270

Next steps / variables to consider

- **Collect more data**
- Plot descriptions
- Story/script
- Posters
- Trailers
- Marketing strategy
- Ancillary revenues
- Piracy

Contact

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Thank you for listening.