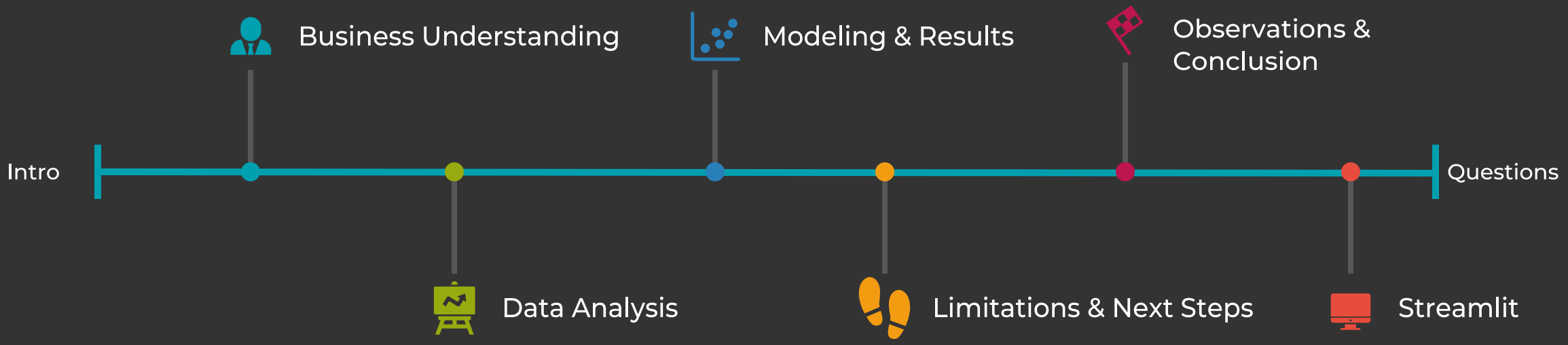
MVP Prediction Project

Troy Hendrickson, Data Scientist

Agenda


Business Understanding
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Business Understanding

Stakeholders

NBA MVP Committee

The Problem

Helps the committee decide who's MVP based on stats not player popularity

The Project

Create a model that determines who will be MVP

The Goal

Introduce the model that gives best results to identify the future MVP

Why an MVP?

What value does an MVP bring to a Franchise?

Team Revenue

Miami Heat team revenue spiked from $124 million in 2009 to $188 million in 2014 during LeBron James tenure.

- Forbes

Why an MVP?

What value does an MVP bring to a Franchise?

Franchise Value

Cleveland Cavaliers franchise value went from $476 million (5th highest in NBA) before LeBron left to $352 million (19th highest) after LeBron's departure

- Forbes

Why an MVP?

What value does an MVP bring to a Franchise?

Attendance

In 2009-10, the Heat attendance was at 90.5%...below the league's midpoint. In 2013-14, it was at 100.9% capacity

- Forbes

Data Understanding

Columns

33

Rows

7,000+

"NBA Raptor Stats"

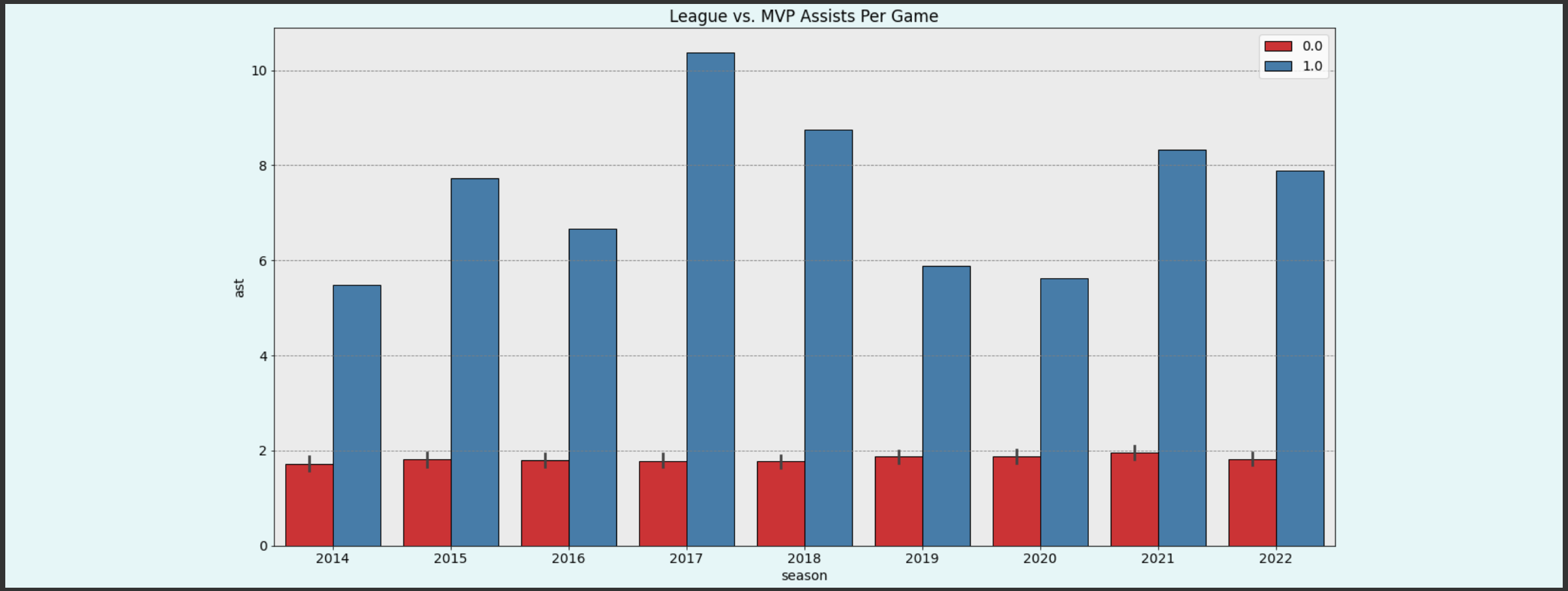
FiveThirtyEight

"NBA MVP Predictor"

Kaggle

Data Analysis

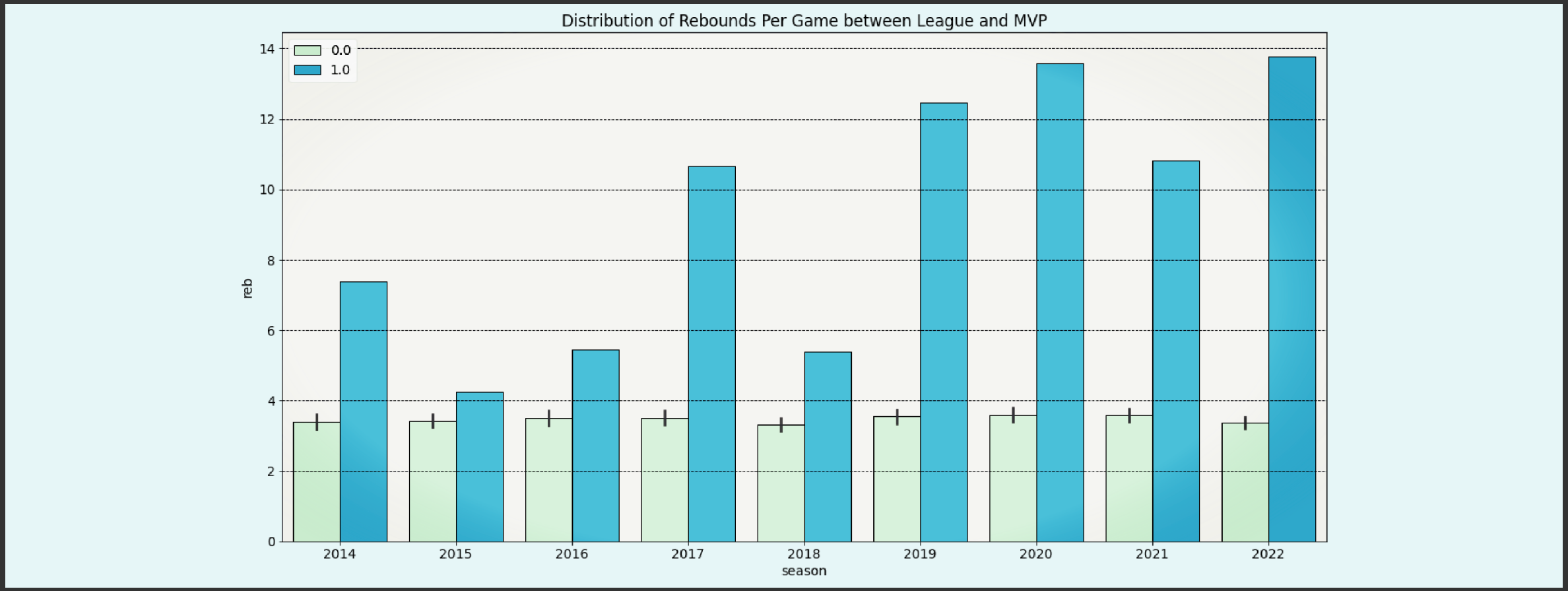
Assists Per Game



“One score makes ONE happy player, one assist makes TWO.” - Toni Kukoc (Bulls Forward 1990-2000)

Data Analysis

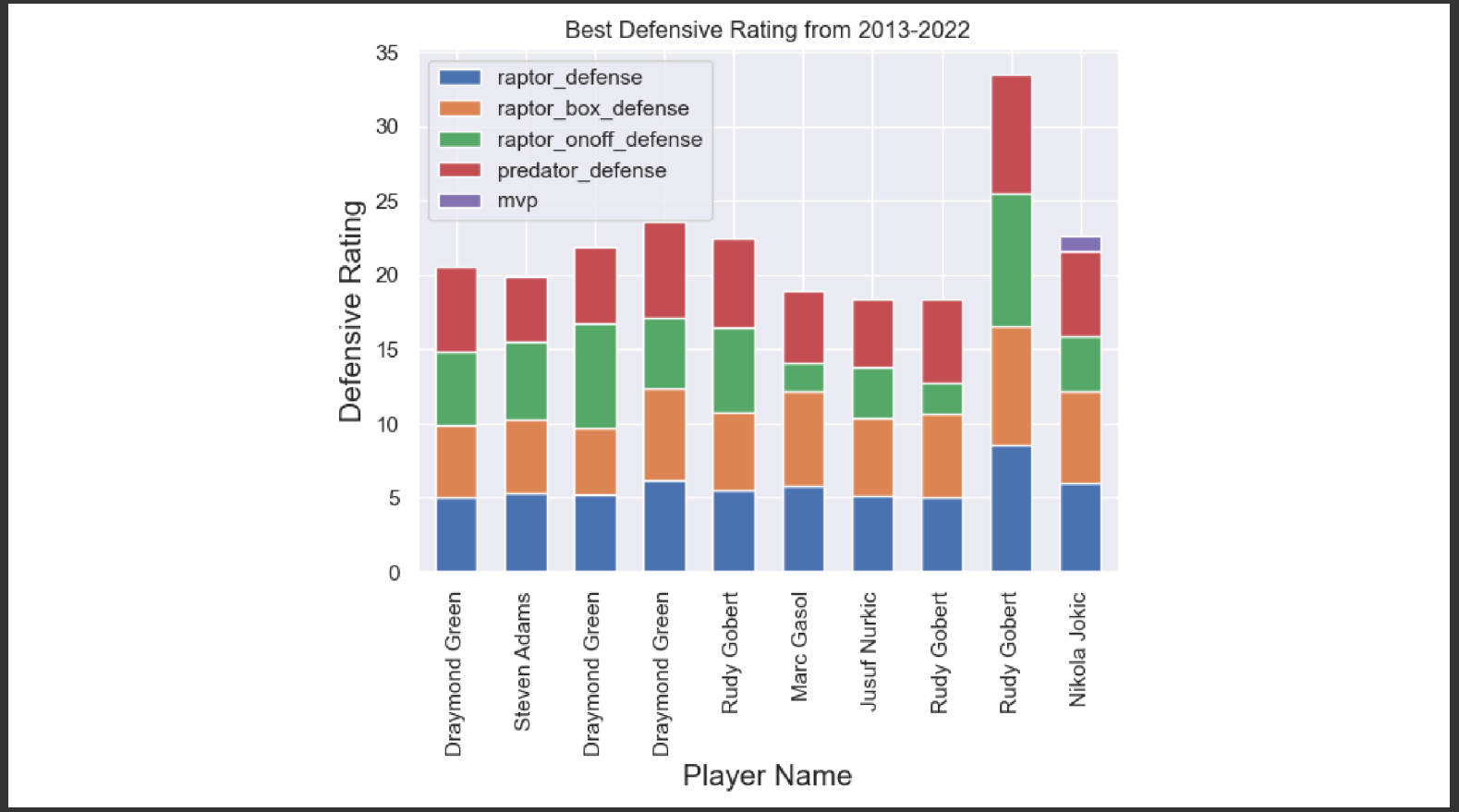
Rebounds Per Game



“No rebounds, no rings” - Pat Riley (Hall of fame NBA coach 1979 - 2008)

Data Analysis

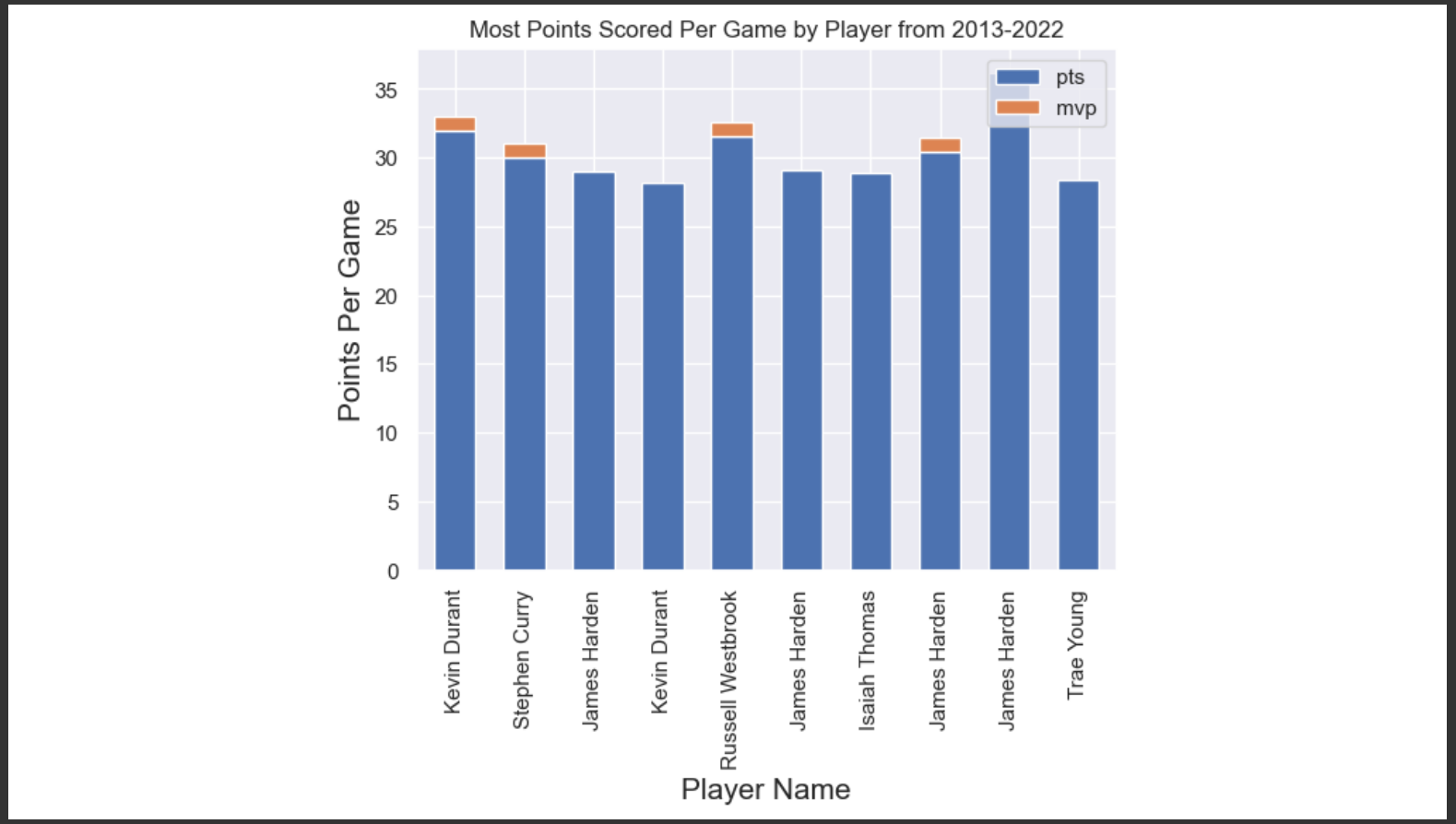
Defense



"Your defense will save you on the nights that your offense isn't working." - Adolph Rupp (Hall of Fame Coach inducted in 1969)

Data Analysis

Scoring Title

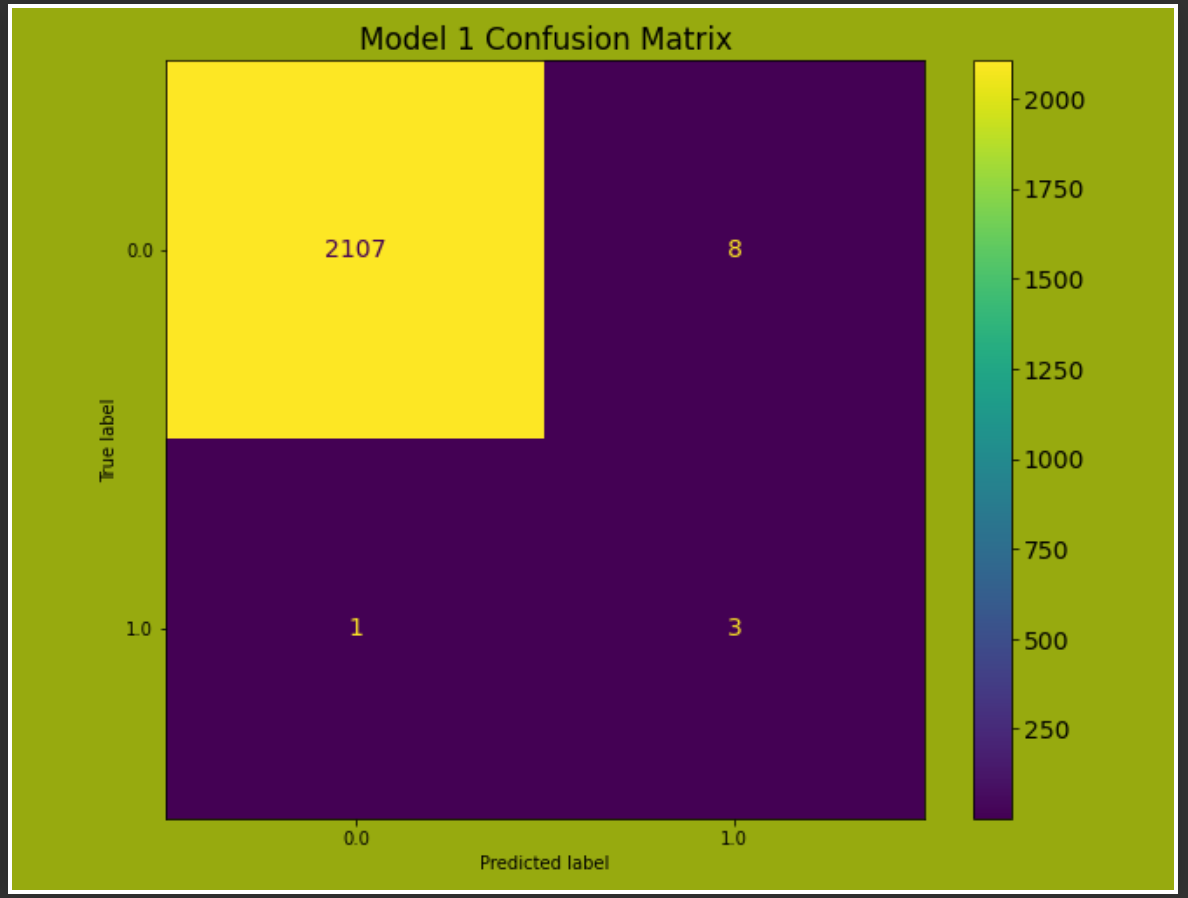


"The only important statistic is the final score" – Bill Russell(Celtics Hall of Fame Player 1956-1969)

The Metrics That Matter

Modeling & Results

- **Classification Model: Logistic Regression**
  Used SMOTE for imbalance purposes
- **Recall Score: 75%**
  The main metric used to determine how well the model performed
- **88% Correctly Predicted MVP's**
  8 out of 9 MVP's in the data set were predicted to be correct



Limitations & Next Steps

- **Team Success**

  Team stats to determine if that changes the outcome of a player winning the award

- **Recency Bias**

  Data was only up to November of 2022, can't predict players playing poorly

- **Injuries**

  Does not take into the account of players getting hurt and how that can impact a players chances

Observations & Conclusions

Nikola Jokic, Denver Nuggets

Predicted to be #1 to win the award. Also was predicted to win in 6 out of 8 models

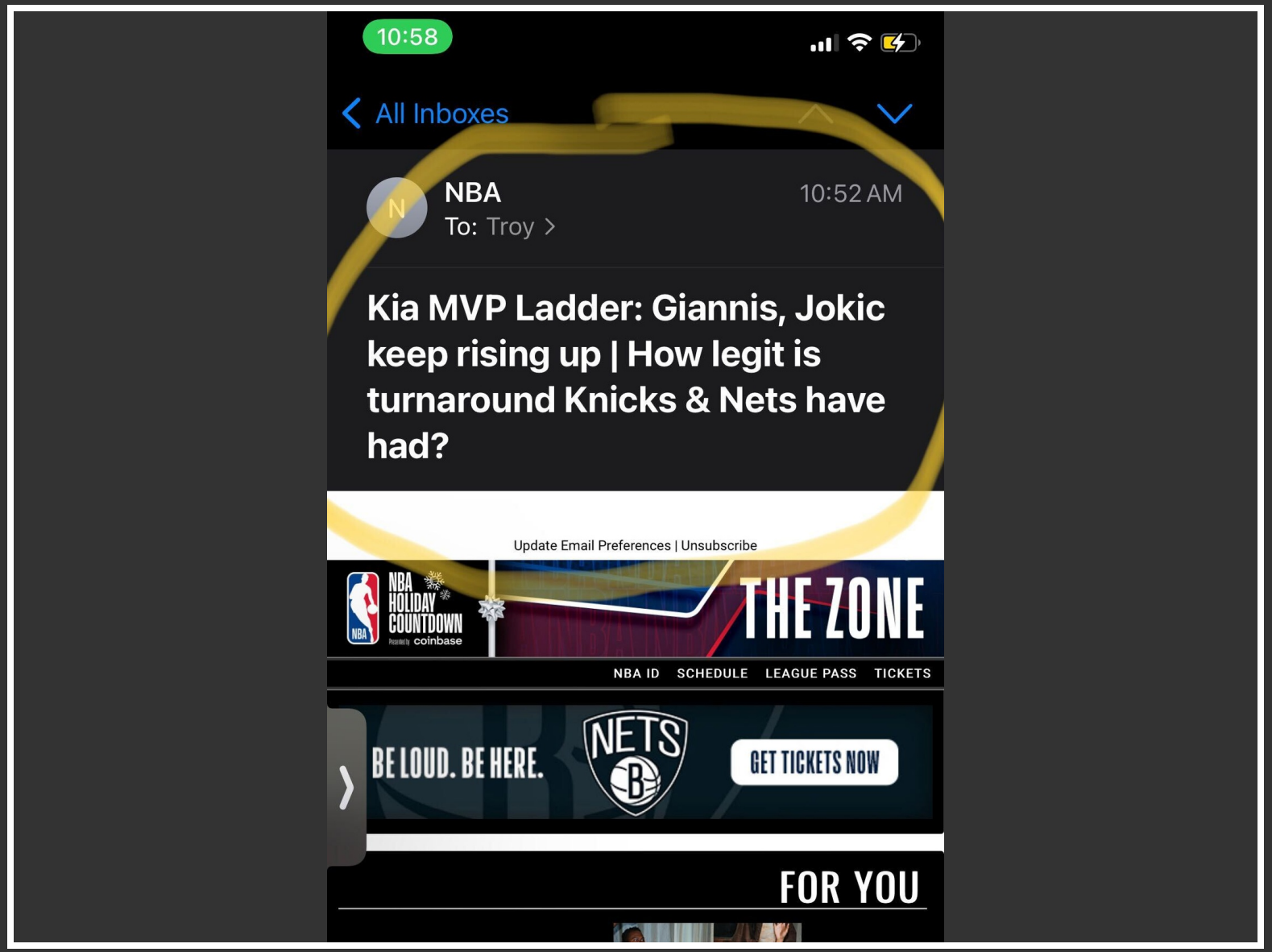
Giannis Antetokounmpo, Milwaukee Bucks

Predicted to be #2 to win MVP. Also came in second in 5 out 8 models.

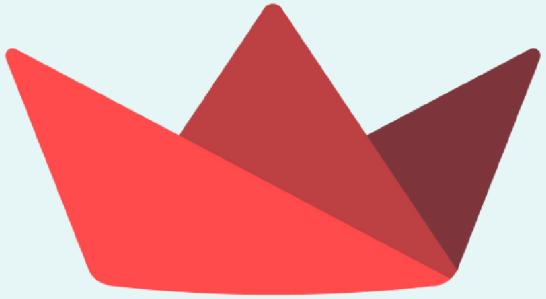
Luka Doncic, Dallas Mavericks

Predicted to come in 3rd to win the award. Recency bias might change these predictions.

Observations & Conclusions



Data Science is Pretty Cool!



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Let's Go!

Thank You!

github.com/tkhendrix22

linkedin.com/in/troy-hendrickson/

troykhendrickson@gmail.com