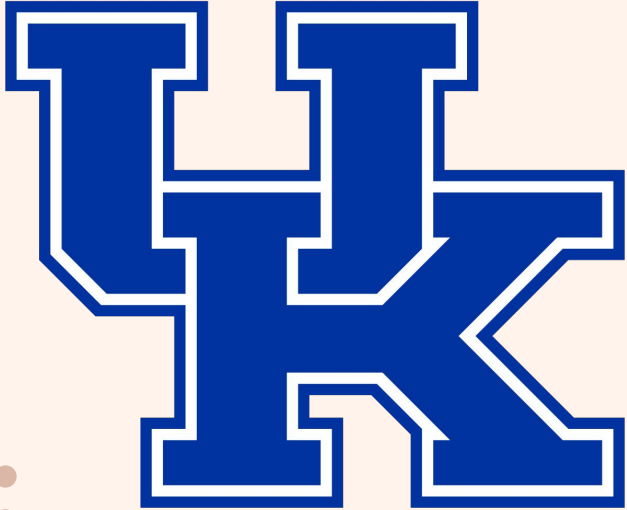# M4AI NCAA Basketball Presentation

By Adeev, Oren, Omar, Kai, and Akshay

1

Team that performed the best:

Kentucky - 38

```
⇥  Team that performs the best:
   TEAM        Kentucky
   W                38
```

0

Team that performed the worst:

San Jose St. - 0

Team with the fewest games won:
TEAM   San Jose St.
W   0

Top 5 teams based on average games won:

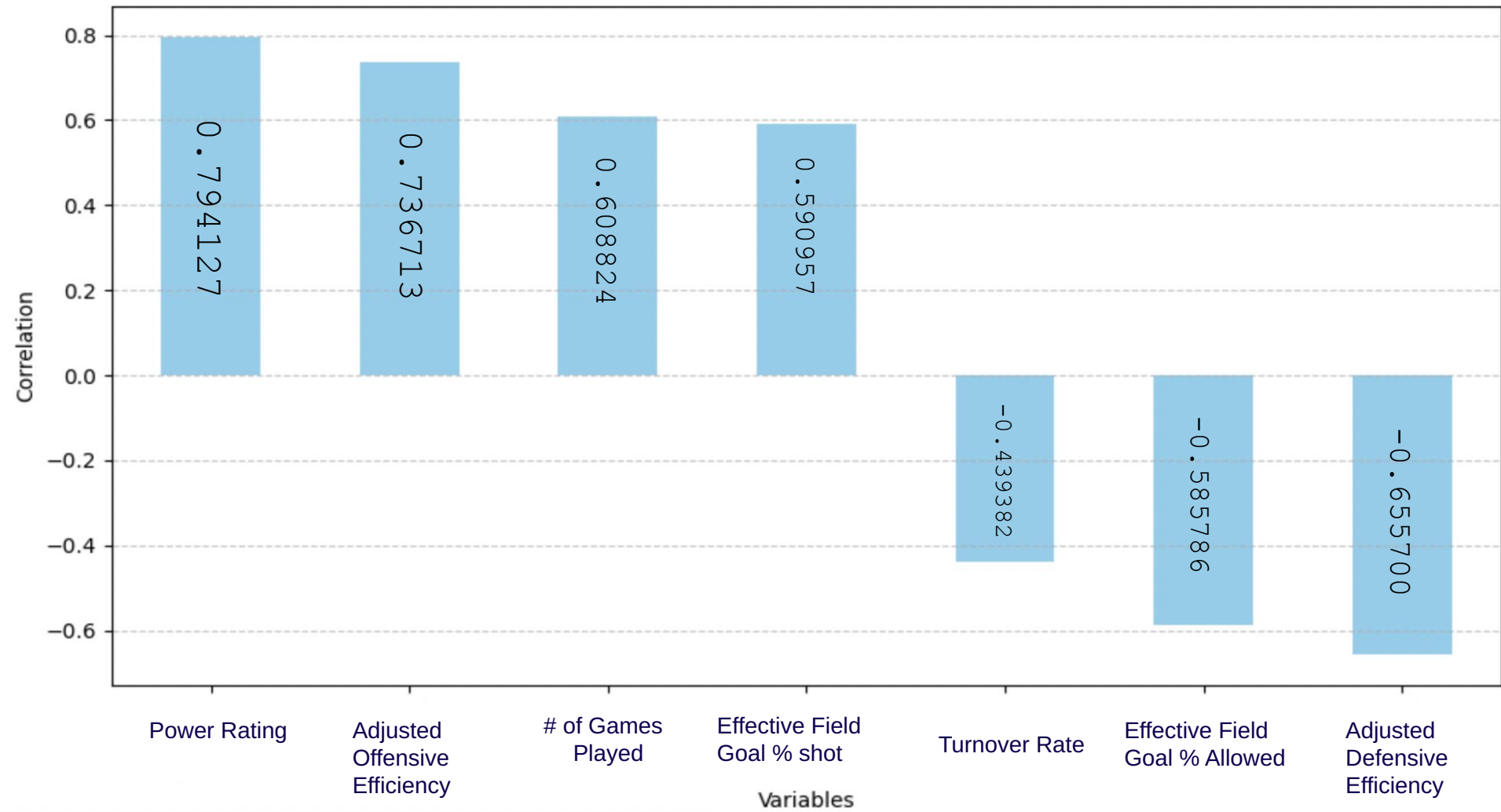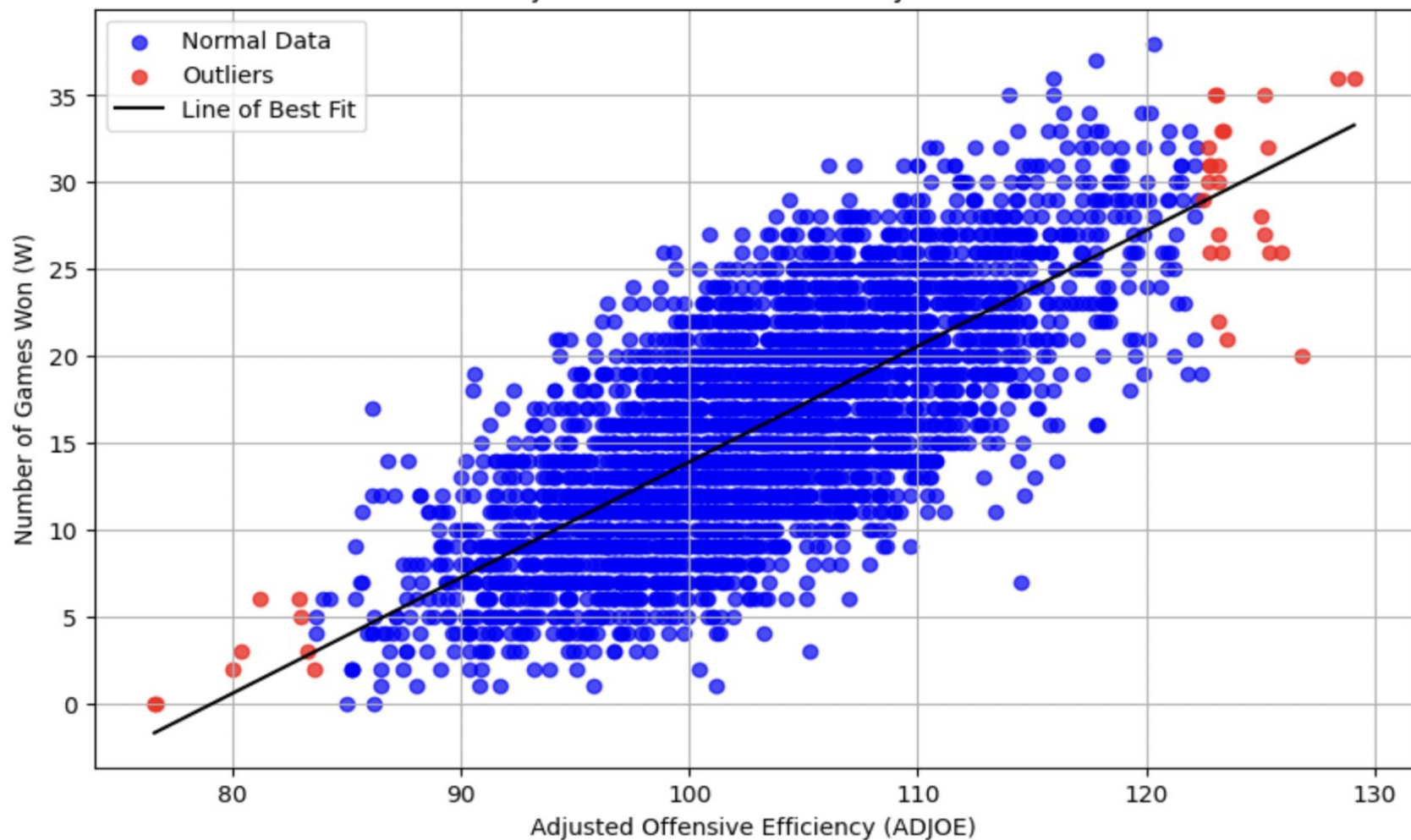| Team	Average games won	Rank
Gonzaga	31.7	1
Villanova	30.0	2
Duke	29.3	3
Kansas	29.0	4
Kentucky	29.0	5

Wait?! Wasn't Kentucky the best team? Why isn't it the best team on avg. games won?

Correlation of Variables with Games Won

Variables (x-axis): Power Rating, Adjusted Offensive Efficiency, # of Games Played, Effective Field Goal % shot, Turnover Rate, Effective Field Goal % Allowed, Adjusted Defensive Efficiency

- Power Rating: 0.794127
- Adjusted Offensive Efficiency: 0.736713
- # of Games Played: 0.608824
- Effective Field Goal % shot: 0.590957
- Turnover Rate: -0.439382
- Effective Field Goal % Allowed: -0.585786
- Adjusted Defensive Efficiency: -0.655700

Correlation between Adjusted Offensive Efficiency and Number of Games Won
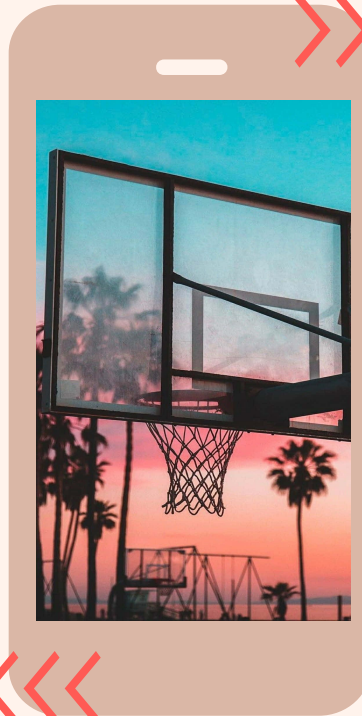
Mean Squared Error

20.40690158605382

Total Squared Error
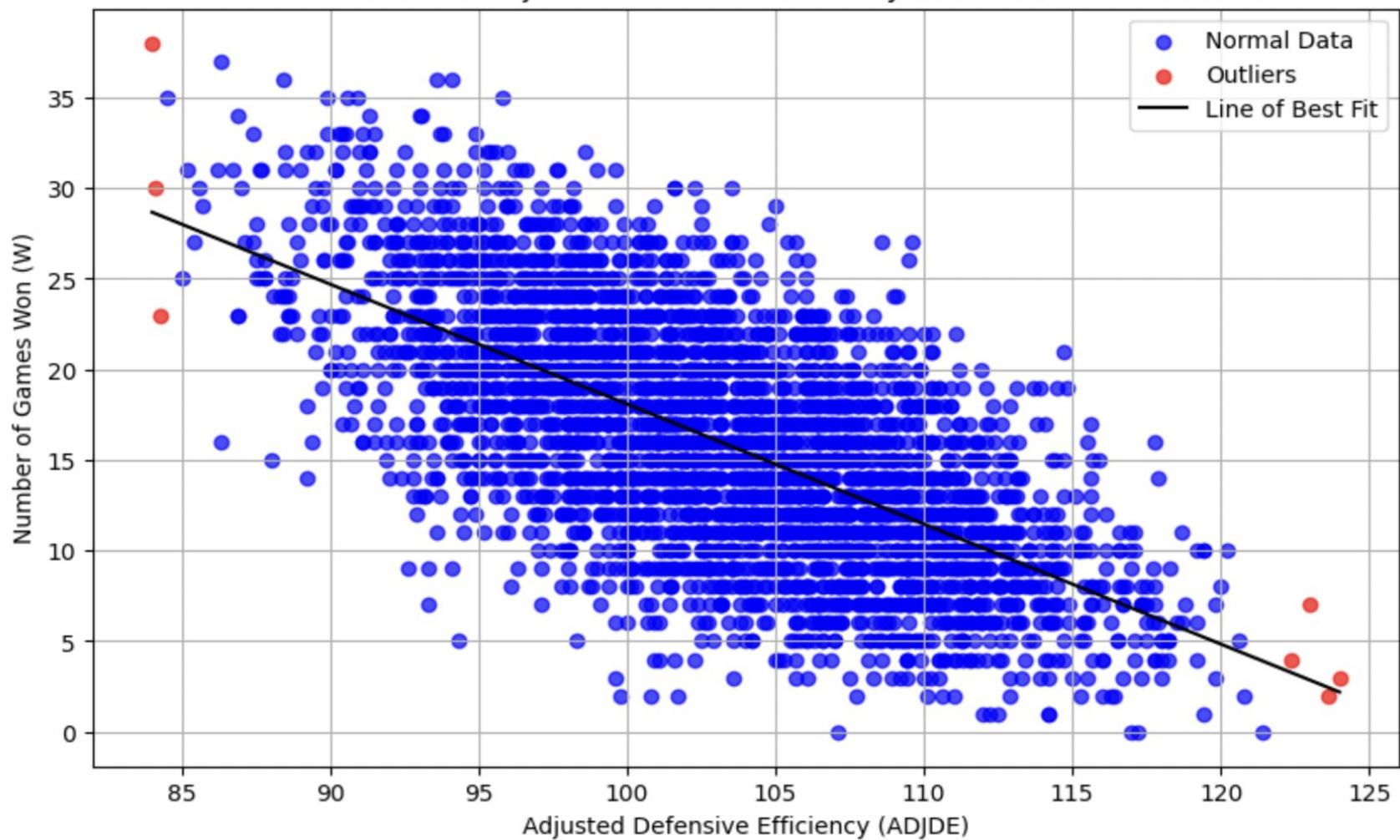
14386.865618167943

Intercept (β0):

−53.17177025109583

Slope coefficient (β1):

0.6704861604076251

Correlation between Adjusted Defensive Efficiency and Number of Games Won
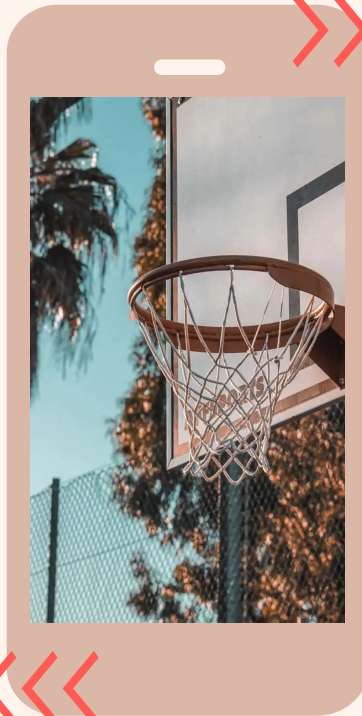
Mean Squared Error

23.339117591280637
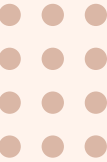
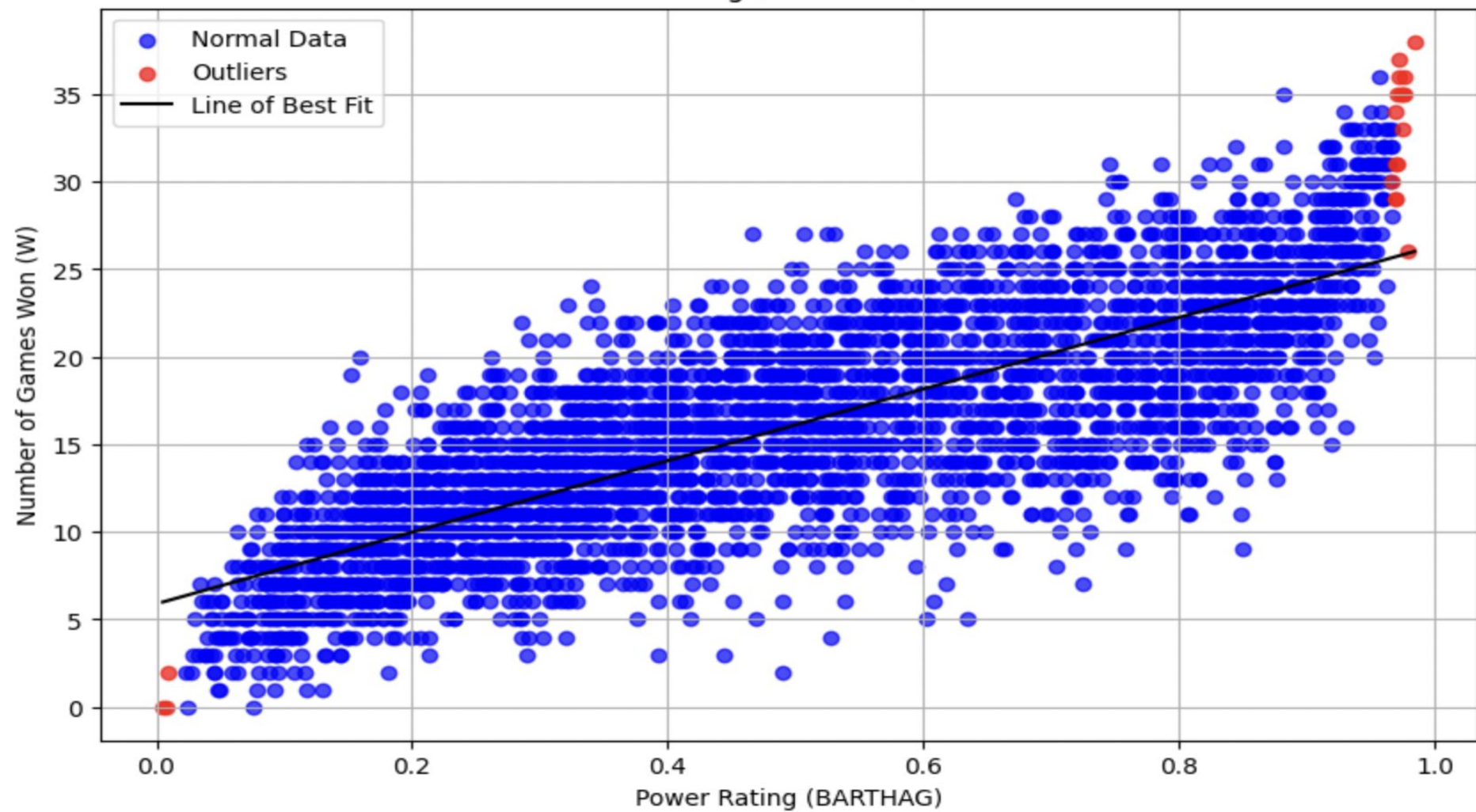## Total Squared Error

16454.07790185285
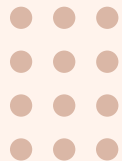
Intercept (β0):

84.25914524979757

Slope coefficient (β1):

−0.6618453599501695

Correlation between Power Rating (BARTHAG) and Number of Games Won

Mean Squared Error

15.574406585380146

Total Squared Error

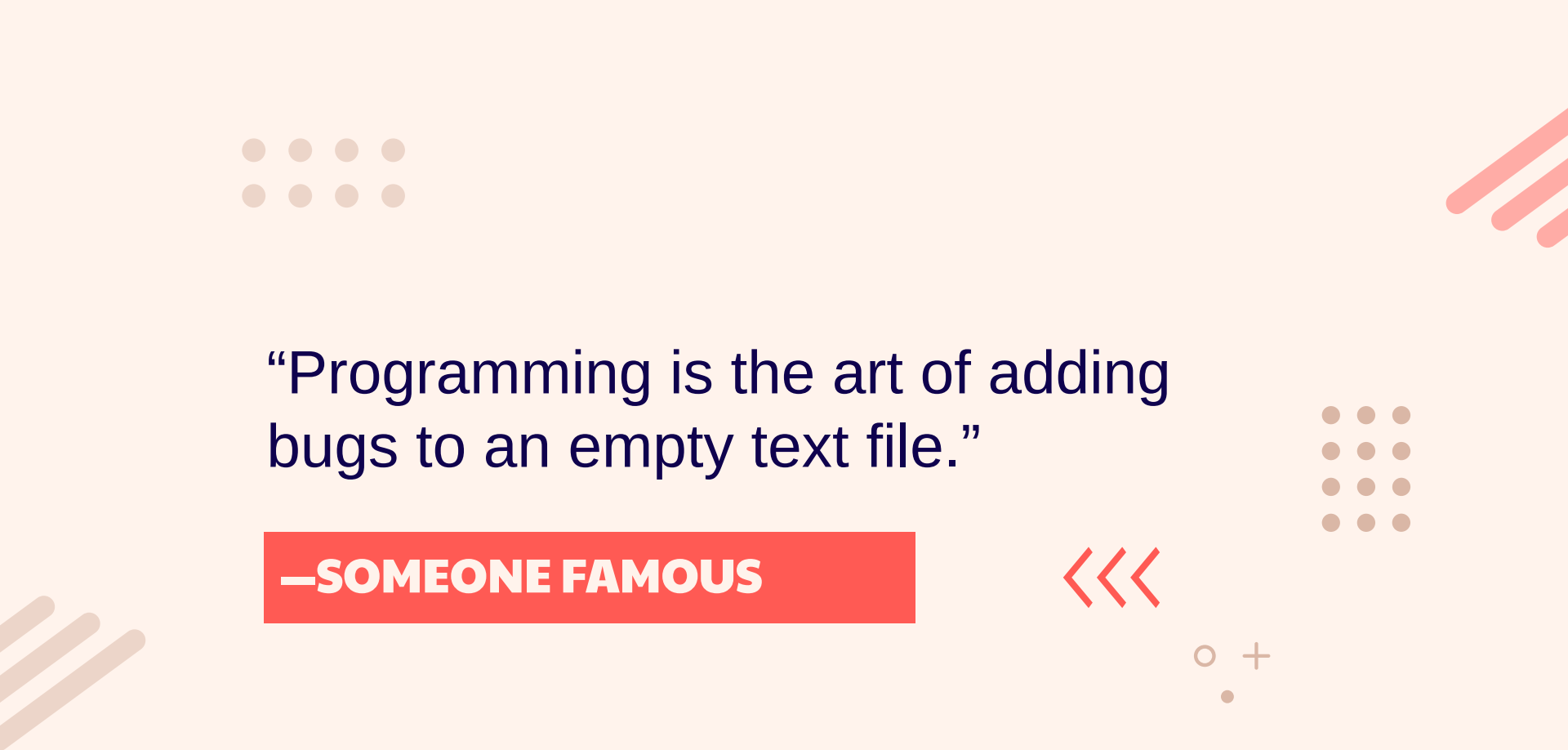10979.956642693003

Intercept (β0):

5.890730794704085

Slope coefficient (β1):

20.442372889099154

Goals for the final project

- Create an AI application with GUI that predicts the outcome of college basketball games based on ~3,600 statistics.
  - Could suggest which team to bet on and how much to bet

- AI would incorporate locational biases (home/away court) to make a better and more realistic prediction.

- AI would also use standard deviation of a team's performance metrics over a season instead of using average games won as a measure of consistency.

"Programming is the art of adding bugs to an empty text file."

—SOMEONE FAMOUS

THANK YOU