Score a Big Contract

Features that Influence NBA Salaries

Introduction

Motivation:

- Generate useful information for Klutch Sports to include in training their material

Objectives/Goals:

- Create a Linear Regression model to predict salary based on their performance statistics.

- Determine which factors are most important when predicting salary.

Methodology

Data

- Data from Basketball-Reference, ESPN, and Spotrac
- Statistics from years 2013-2020
- 1276 rows of data

Metrics

- R^2 to determine model fit
- RMSE used to determine model accuracy
- Coefficient size to determine feature magnitude

Models/Tools

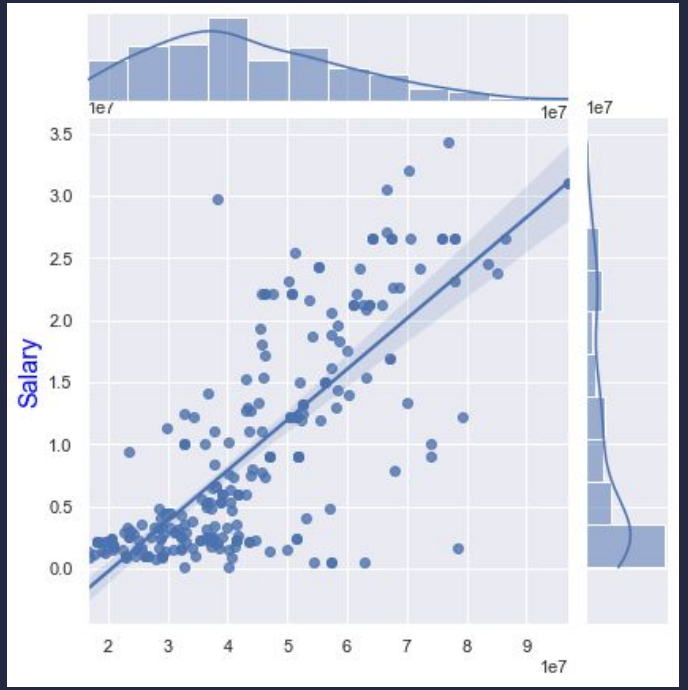
- Ridge Regression model
- Beautiful Soup
- Sklearn
- Pandas
- Seaborn


Steph Curry's
Contract Breakdown
4 YEARS
$215M
1 YEAR
$53.75M
1 DAY
$147,159
1 HOUR
$6,132
1 MINUTE
$102
1 SECOND
$1.70
Rakuten
OAKLAND
30

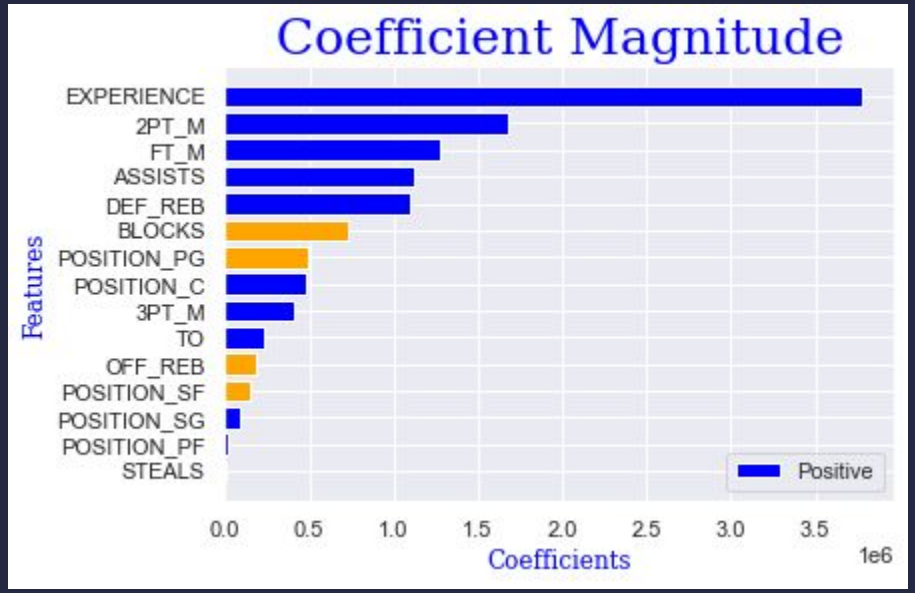
Results

Model Fit

- **Linear Regression**
  - R^2 of **0.58621**
- **Ridge Regression**
  - R^2 of **0.58622**
  - RMSE of 3.5969711e+7



Results


Coefficient Magnitude
EXPERIENCE
2PT_M
FT_M
ASSISTS
DEF_REB
BLOCKS
POSITION_PG
POSITION_C
3PT_M
TO
OFF_REB
POSITION_SF
POSITION_SG
POSITION_PF
STEALS
Features
Positive
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
1e6
Coefficients

Examples

LeBron James:

- Model predicted a $107M
- Actual Salary $41.1M

Jayson Tatum:

- Model predicted a $41.7M
- Actual Salary $28.1M

Conclusions

What matters most?

- You can’t beat experience!
- Scoring, assists, and rebounds are big factors
- Centers tend to earn more money

Future Work

- Gather more historical statistics and contract data
- Create models for players with different levels of experience