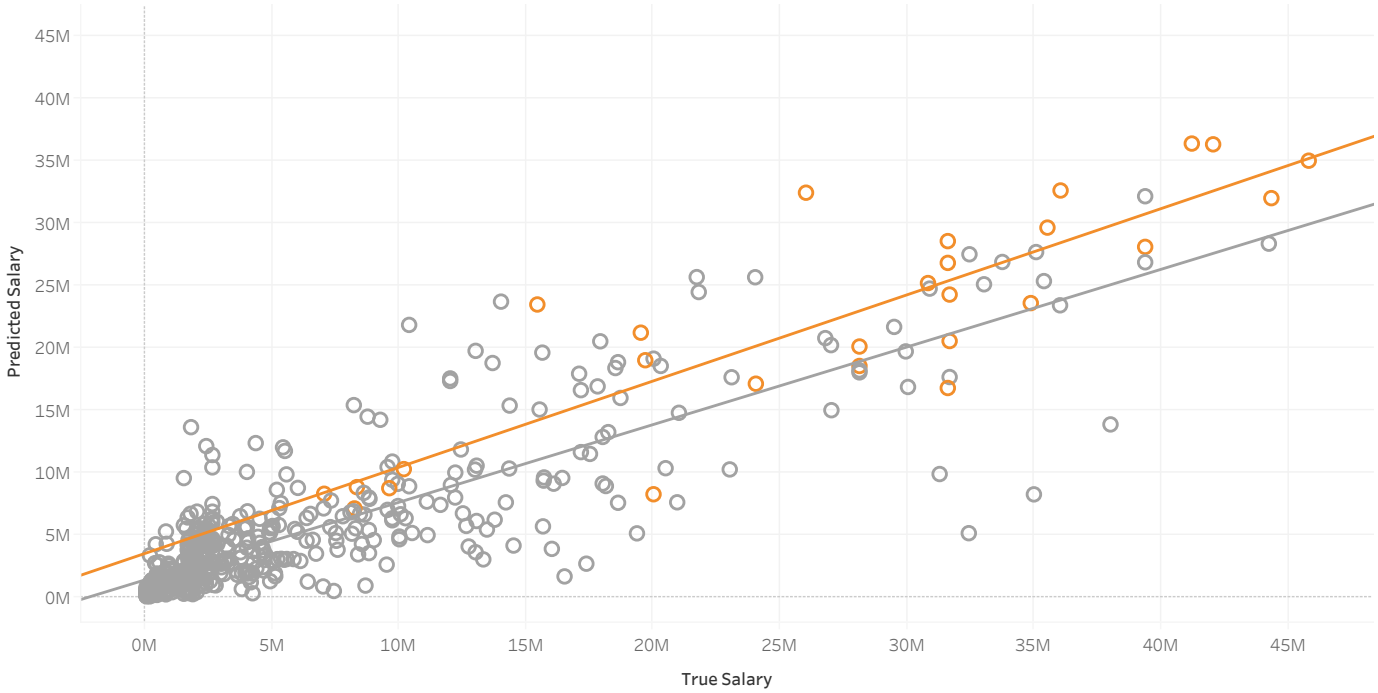
Model Evaluation

Player Salary Predictions	Players with Highest Prediction Errors	Salary Predictions by Team Success	Salary Predictions by Market Size

Predicted Salaries versus True Salaries Per Player



By contrasting 2022 All-Stars versus the rest of the league, it is apparent that the model is able to predict these players will make more money while still accounting for age. This results in players such as Luka Donic and Ja Morant having relatviely low predicted salaries even with their high, MVP-level production. The reason for this is NBA players must first complete their rookie contract (a preset amount based on their draft position) before they can negotiate a new, higher paying deal. Our model accounts for this fact with predictions of their salary in the sams range as their true number, while older players such as Kevin Durant and LeBron James, unconstrianed by this rule, have true and predicted salaries near 40 million dollars.

Model Evaluation

15 Most Overpaid Players

Full Name	
Blake Griffin	-27,265,341
Kemba Walker	-26,712,391
Klay Thompson	-24,113,412
Kevin Love	-21,369,269
Russell Westbrook	-15,839,620
Markelle Fultz	-14,817,994
Andrew Wiggins	-14,785,123
Joe Harris	-14,654,582
Goran Dragic	-14,213,985
Kristaps Porzingis	-13,976,942
Gary Harris	-13,305,567
D'Angelo Russell	-13,135,256
John Collins	-12,735,180
Tobias Harris	-12,568,324
Damian Lillard	-12,465,378

15 Most Underpaid Players

Full Name	
Jalen Brunson	11,865,711
Reggie Jackson	11,486,679
Andre Drummond	9,747,464
Jonas Valanciunas	9,737,059
LaMarcus Aldridge	8,792,086
Dejounte Murray	8,078,140
Jae'Sean Tate	8,063,539
Bobby Portis	8,041,459
Carmelo Anthony	7,797,600
Seth Curry	7,227,601
Kyle Kuzma	6,787,448
Miles Bridges	6,624,782
DeMar DeRozan	6,472,402
Shai Gilgeous-Alexander	6,262,221
Dorian Finney-Smith	6,075,792

The model's largest prediction errors make sense when looking at the player's salary with context. For instance, in the case of Blake Griffin and Kemba Walker, their 2022 salary is so high because two teams are paying them, meaning that they were so overpaid relative to their production that their orginal teams (Detroit Pistions and Oklahoma CIty Thunder) agreed to buy them out. Meaning these teams would literally pay these players not to be on the team anymore. Other overpaid players (Markelle Fultz and Klay Thompson) have just recently returned from season ending injuries.

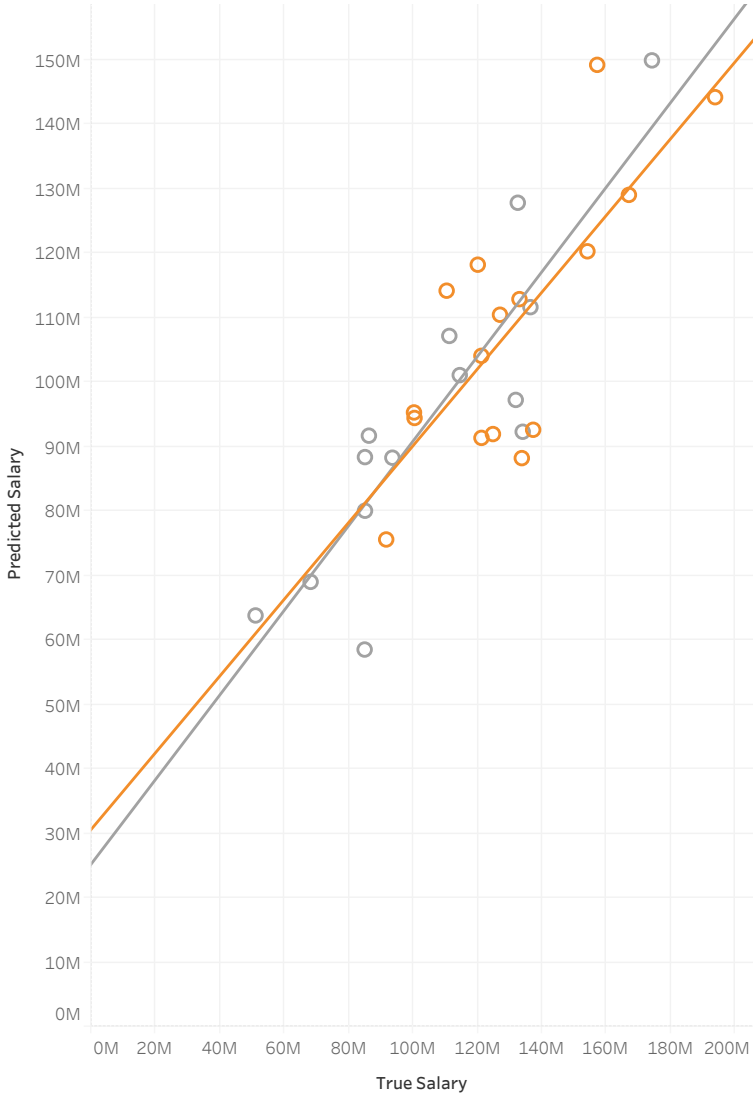
In regards to underpaid players, Jalen Brunson and Ja'Sean Tate are both 2nd round and undrafted players, therefore making a set, realtively extremly low salary. This shows an additional future variable to use in this model could be draft position.

Model Evaluation

Prediction Error by Team Success

Team (group) 1	
Non-Playoff Teams	-160,988,361
Playoff Teams	-360,267,868

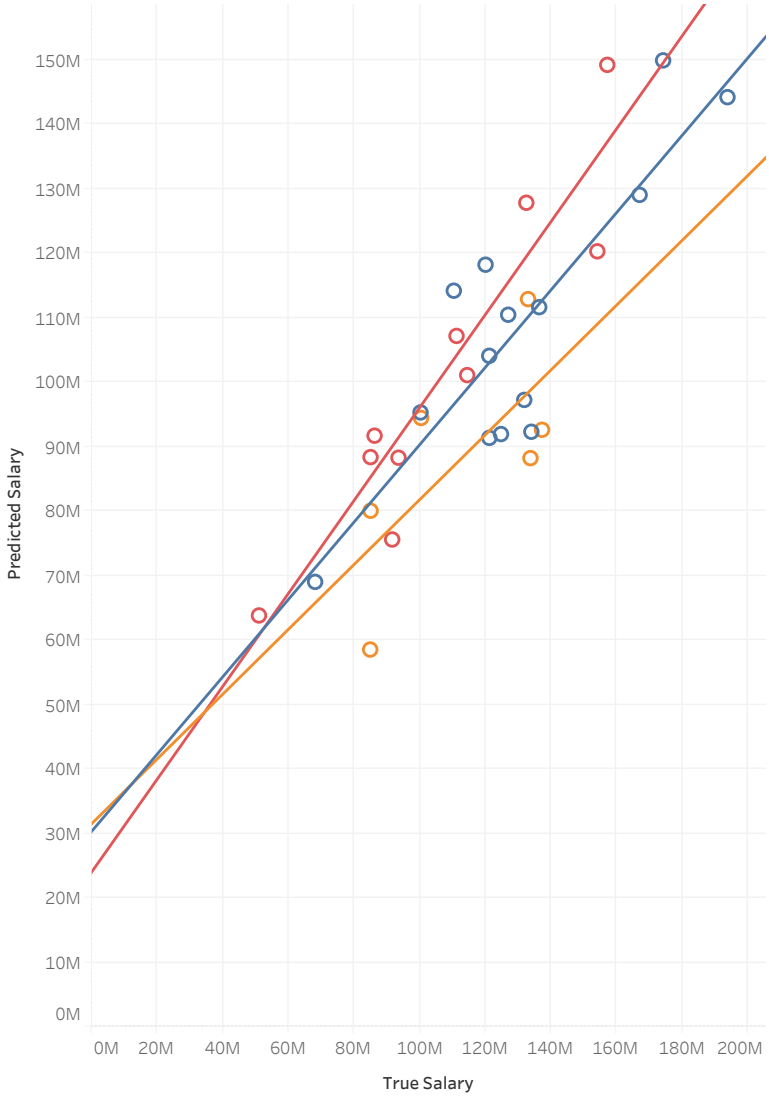
After dividing the NBA by playoff teams and non-playoff teams we see a stark differemce in R-squared. Our model is able to explain much of the variance for non-playoff teams as they are in most cases far less aggressive in signing players, and thus, pay them much more in line with their pay. While playoff teams, in pursuit of an NBA championship, offer higher salaries to entice players to join their teams.



Model Evaluation

Prediction Error by Market Size

Team (group) 2	
Large Market Teams	-310,761,581
Medium Market Teams	-147,391,457
Small Market Teams	-63,103,191



By splitting the NBA teams by their respective market sizes, it becomes apparent that their is a stark contrast in how they operate. The prediction error of our model increases as the market size increases, indicating that the teams from larger markets tend to overpay for players as they can afford to.

The teams from small markets have an R-squared value of 0.87, showing that our model can explain an extremely high amount of variance for these teams as thye tend to pay players a more 'fair' rate for their production.