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MOD 3 PROJECT

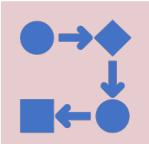
# BUILDING AN NBA POSITION CLASSIFIER

# GOAL

- Build a model that can classify a player as one of 5 positions based upon their season stats
- A player can only be classified as a Point Guard (PG), Shooting Guard (SG), Small Forward (SF), Power Forward (PF), or Center (C)

# BUSINESS UNDERSTANDING

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Why would we want to create a model to classify position?



It can act as a tool to evaluate players in a draft or free agency



It provides a more objective measure to evaluate a player

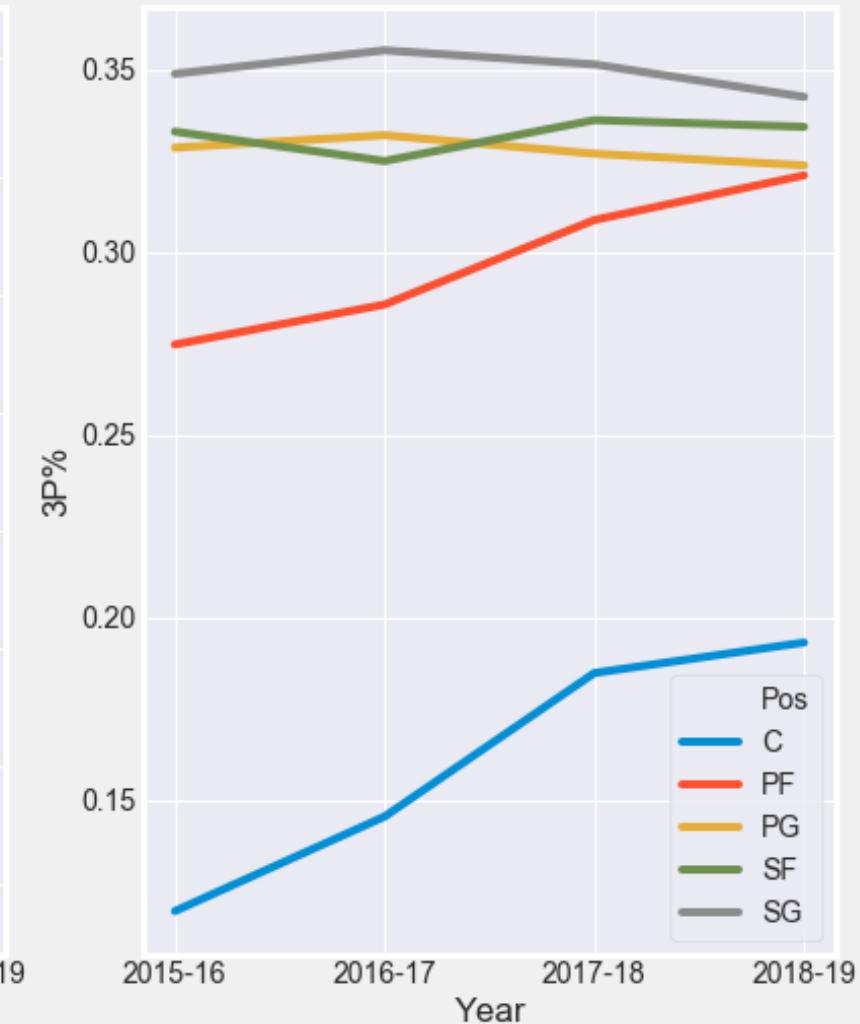
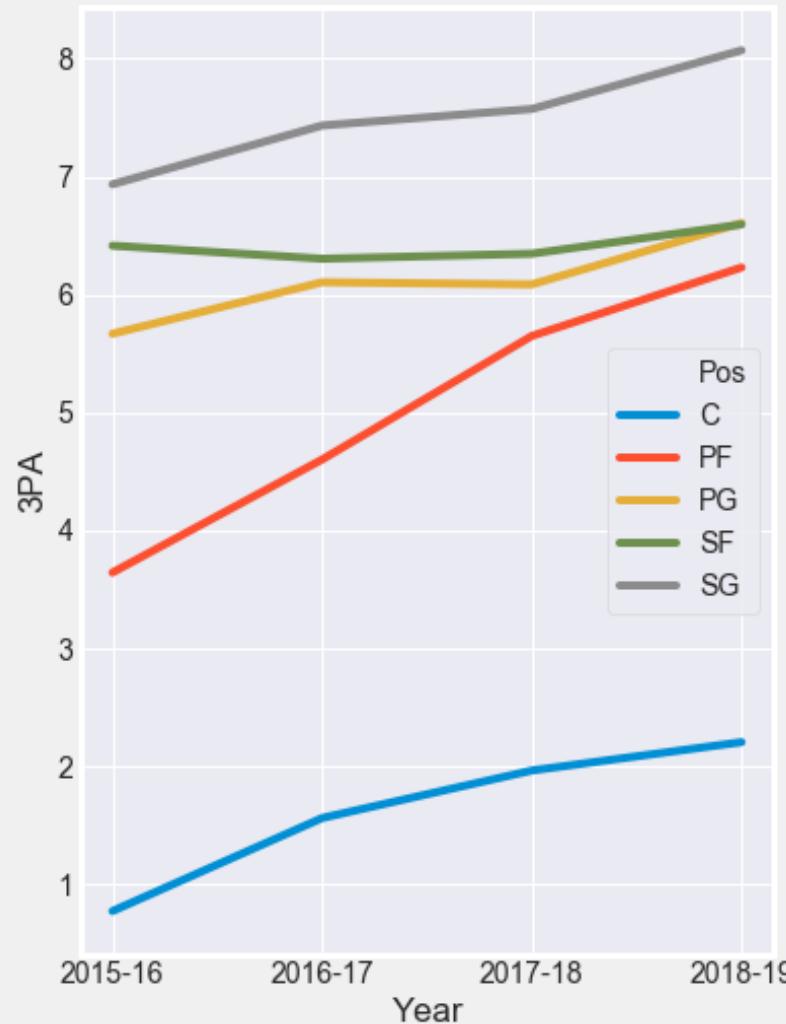


The model can predict the probability of each position which allow us to evaluate different lineups

# EXPLORING HOW EACH POSITION PLAYS

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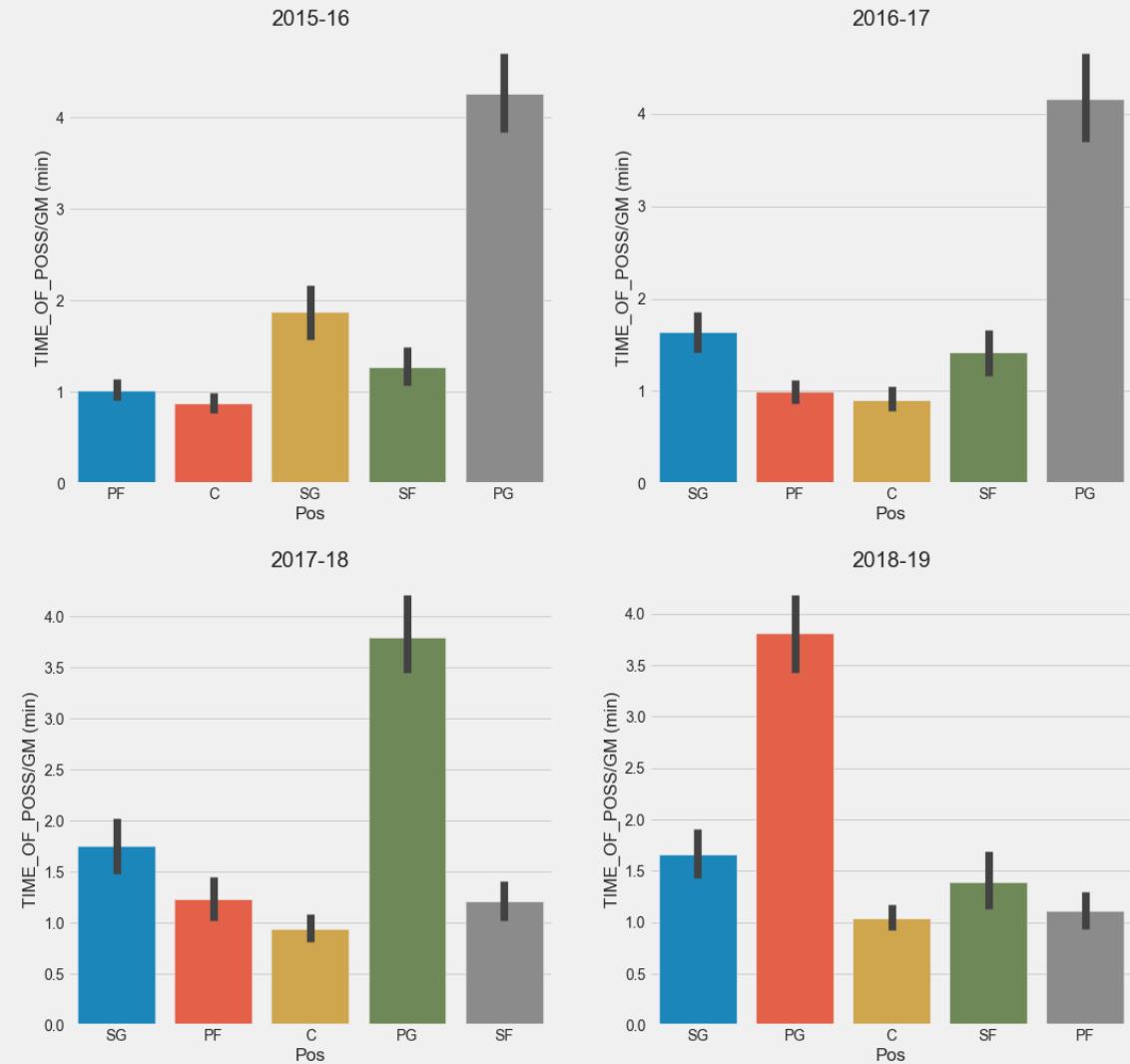
3 Point Attempts and Percentages per 100 possessions by Position



# EXPLORING HOW EACH POSITION PLAYS

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Average Time of Possession by Position between 2015-16 and 2018-19



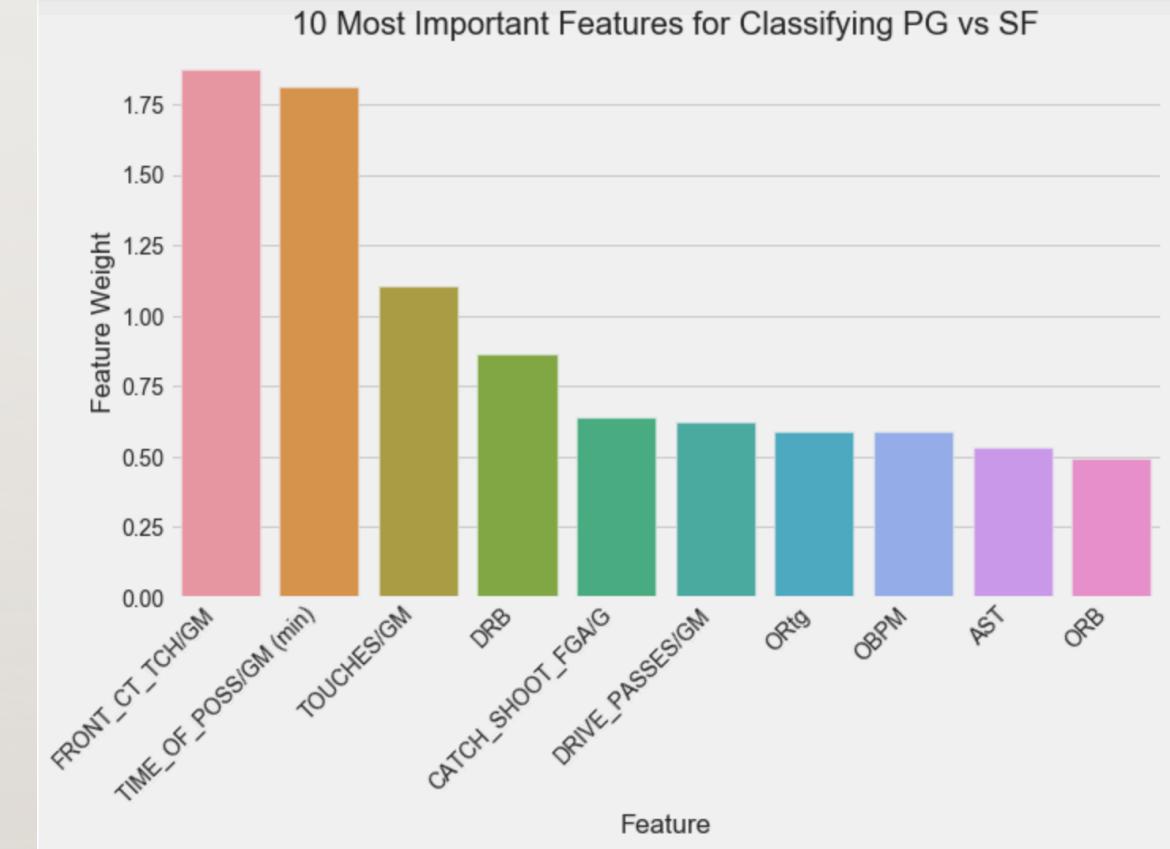
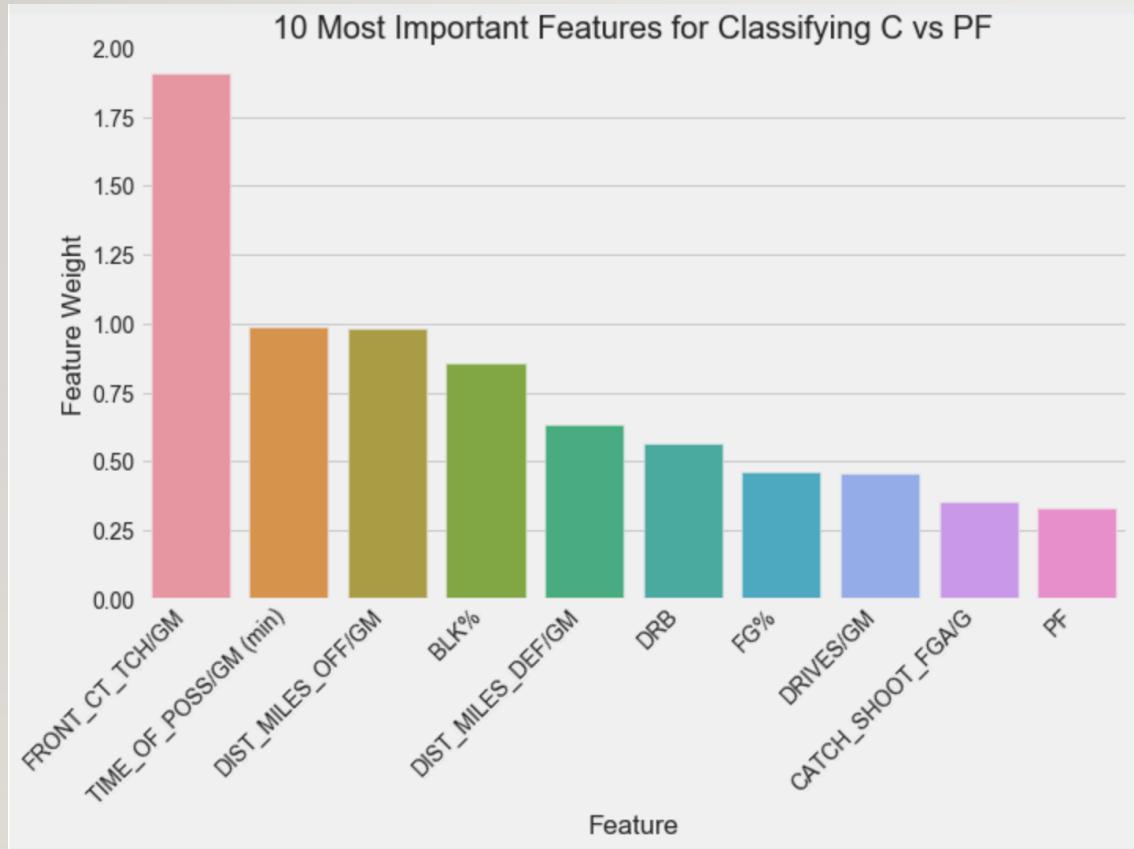
# MODEL RESULTS

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- Our model is 74% accurate
- This doesn't account for the fact that some players can play multiple positions
  - 24% of power forwards were classified as centers
  - 20% of shooting guards were classified as small forwards
- Bad Errors
  - 1 center classified as a small forward
  - 2 shooting guards classified as power forwards

# MOST IMPORTANT FEATURES

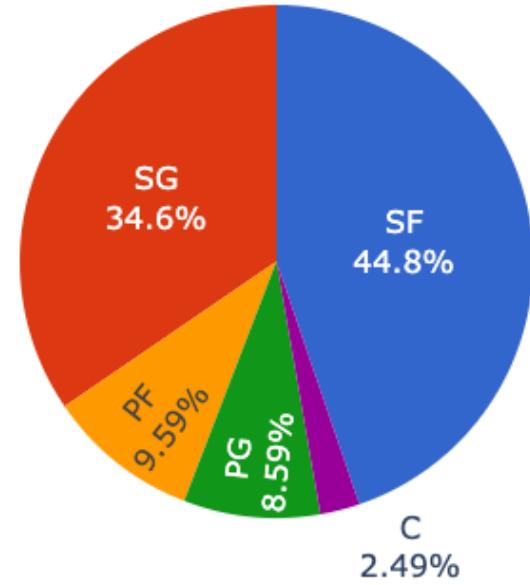
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# AN EXAMPLE OF POSITION BREAKDOWN

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LeBron James (15-16)



SF  
SG  
PF  
PG  
C

# FUTURE WORK

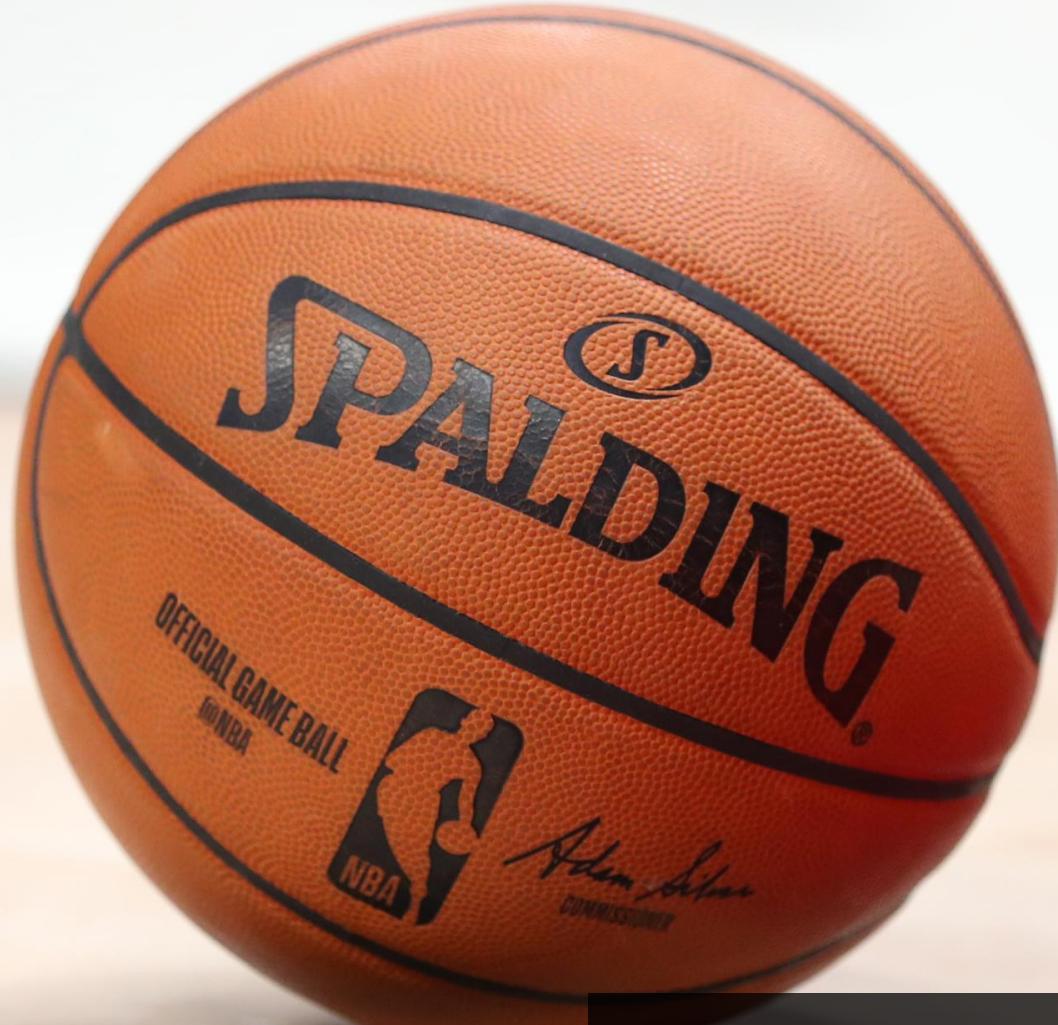
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Create data set of college players and test the model to see if there is a difference in position vs predicted NBA position

Using the model to evaluate position breakdowns for players selected to all NBA teams

Building a model for the WNBA and using women's college players to test the model

Explore year over year position breakdowns for a player



THANK YOU!