

A dynamic photograph of a basketball player in mid-air, performing a layup. He is wearing a yellow tank top and red and black shorts. The ball is held in his right hand, and his left arm is extended for balance. The background is a bright, cloudy sky. A basketball hoop is visible on the far left.

NBA Player Similarity Recommendation

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Agenda



Business Understanding



Data Analysis



Recommendation System



Next Steps



Observations/Conclusions

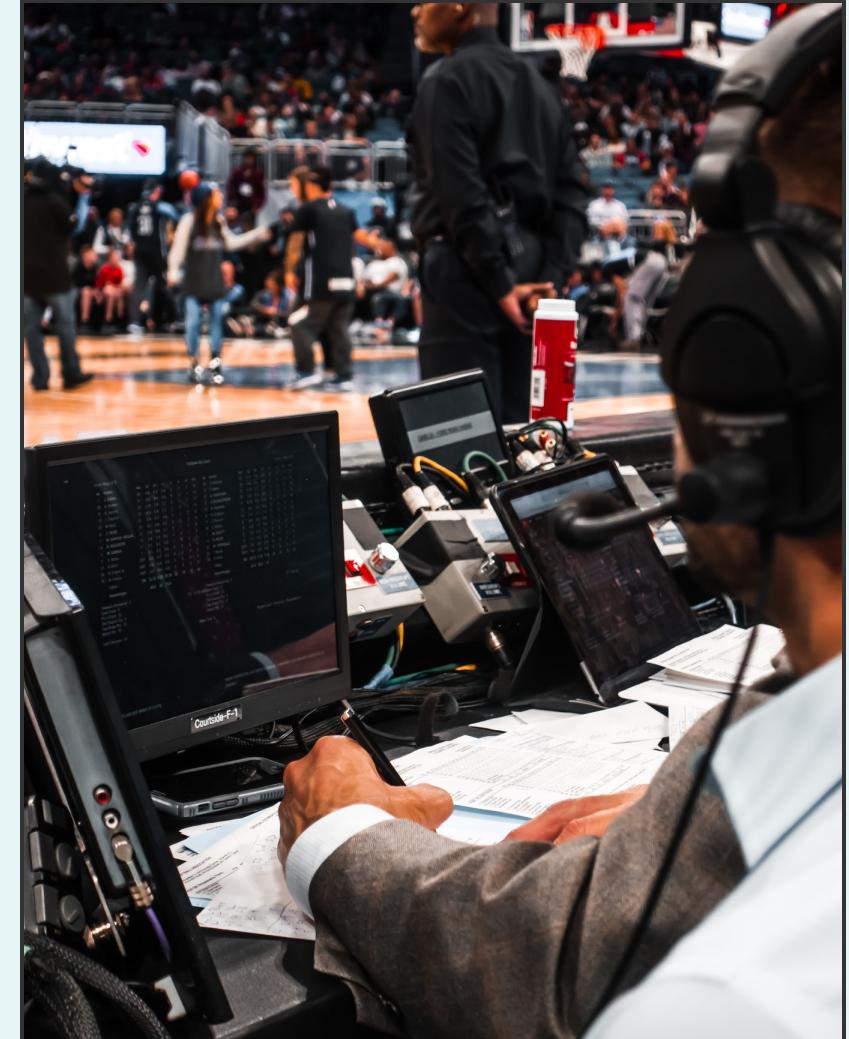
Business Understanding



Stakeholders

- NBA Scouts/Front Office
- Recommendation system on player similarity based on stats
- What happens when a player leaves?
- Easier path for team building

Data Analytics



- RAPTOR/PREDATOR
NBA advanced stats
- Historical Players
Players that played from 1977 to Current
- Teams
Includes teams that are not currently in the league

160k+

Rows

60

Columns

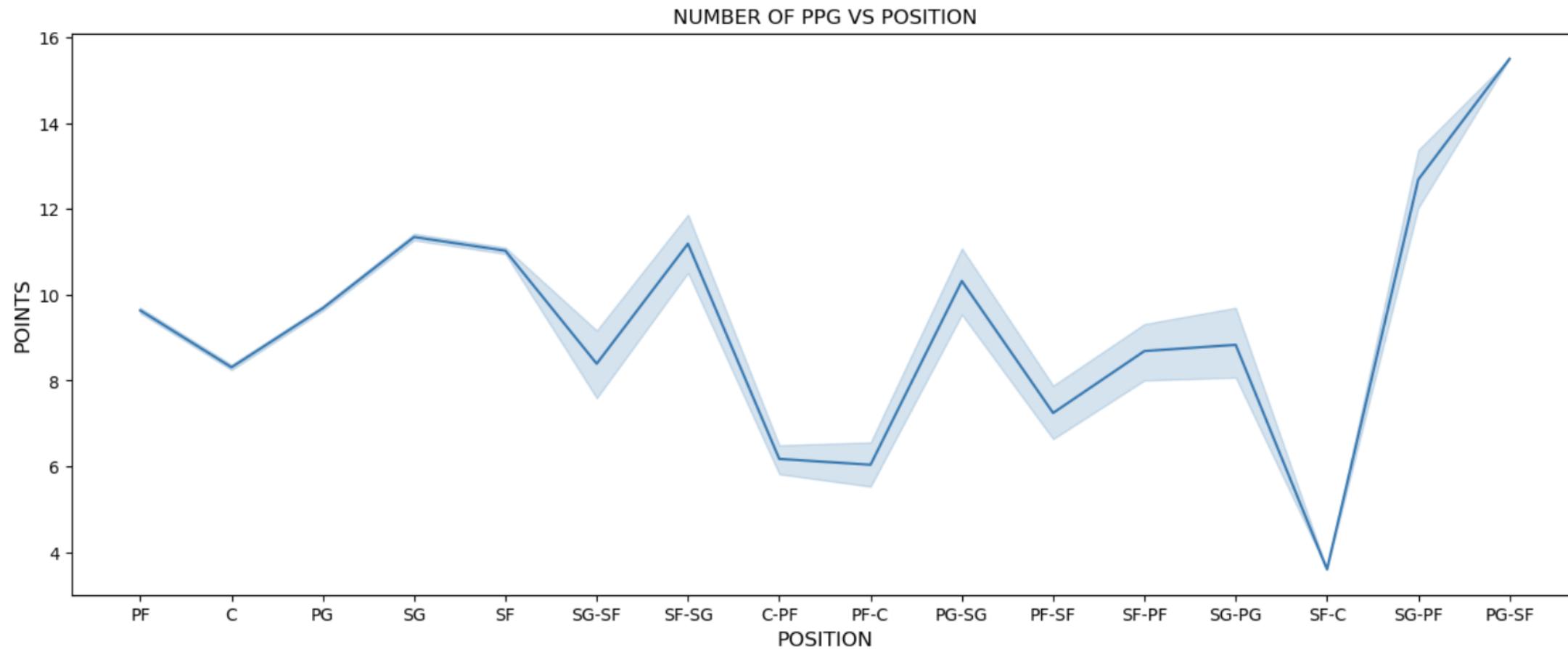
FiveThirtyEight

"Historical RAPTOR stats"

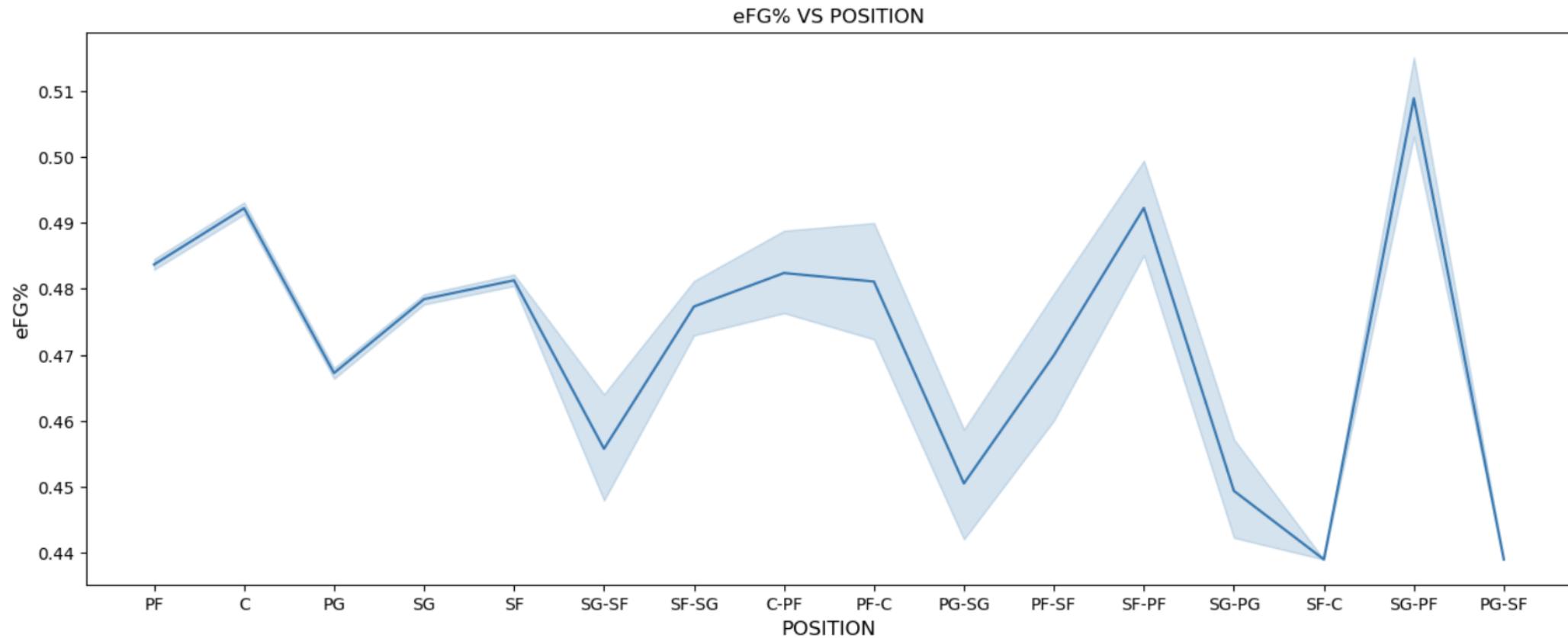
Kaggle

"NBA Season Stats"

Player Positional Stats



Player Positional Stats



Modeling

- Predict Player Position vs. Stats
- Decision Tree Model
 - Model Accuracy: 83%
- Most Important Features
 - Height
 - Weight
 - Assists
 - Rebounding



Recommendation System

What players are most similar to others?

- Cosine Similarity
- Advanced stats = better results?
- Possibly help a team save \$\$\$
- Takes position into effect



Next Steps

- Create a Web App

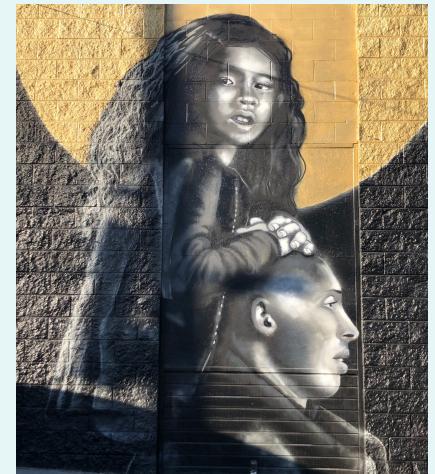
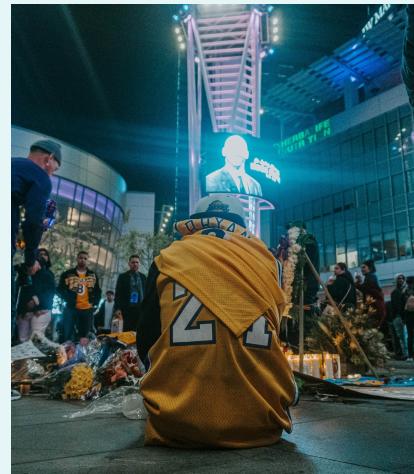
Allows scouts to easily use

- Add Player Salaries

NBA Salary Cap influences FO decision making

- Show individual team stats

Will help with team building



Observations/Conclusions

- Attempting to replace a player is HARD!
So many factors go into the decision
- The game has changed
Players are more skilled which bumps stats
- Shooting, Shooting, Shooting
Data set shows shooting can be measured in a bunch of ways



Thank You!



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