Building a Championship NBA Team: Analysis Dashboard

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Blueprint of Final Dashboard

Building a Championship NBA Team

Our team wants to <u>generate a model</u> that is able to <u>predict a team's</u> likelihood to win the NBA.

By training our model on the results of each team in NBA history by season, we can **make a prediction on any given organization** in the future.



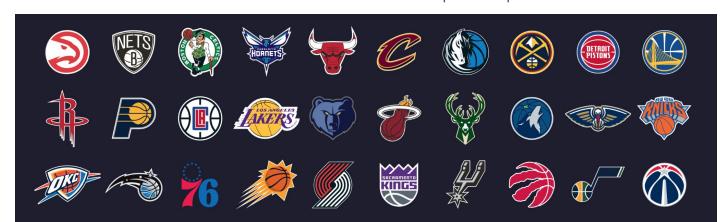
Building a Championship NBA Team

Final Dashboard

For our Final Dashboard, we will create an interactive dashboard by NBA Team and NBA Player.

Our Final Dashboard will include statistics as well as information on salaries for teams and players.

The Final Dashboard will help users determine what it takes to be a championship NBA team.



Blueprint of Final Dashboard

Which NBA Team had the best performance?



Which NBA Player had the best performance?

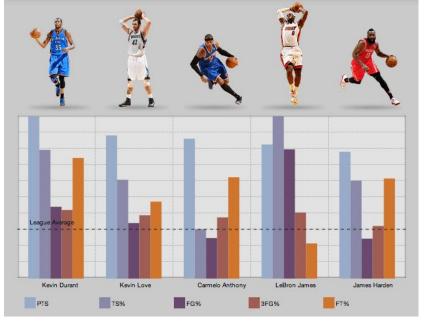


Final Dashboard: Statistics

Player information, team information, and NBA ranking history are all vital in creating a championship NBA team.

Based on NBA statistics, we will provide a rank of best performing NBA Teams and NBA Players.





Final Dashboard: Salary

A NBA team's salary cap plays a vital role in building a team and the success of the season.

Based off the players salaries from espn.com, we will provide information on a team's salary cap and player's salary in our Final Dashboard.

We analyze how teams utilize their salary cap and the success of the players the team acquires.



Tools Used for Final Dashboard

Final Dashboard Tool: Tableau Public

We will use Tableau Public to create our final dashboard.

The dashboard will be an interactive platform to help users understand what builds a championship NBA team.



We Identified 3 Key Areas for Data Sourcing

1. Player Information

This includes position, historical injuries, aggregated statistics and various salary information

Players are vital in building a championship team!

2. Team Information

Who is the coach? What is the attendance? What is the available salary cap?

Players cannot win the NBA without a sound team as a foundation.

3. NBA Season History

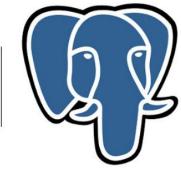
Where did teams placed in the past?
What were player stats for each year? Injuries?
Salary? Other misc. Info

Understanding the rankings gives us training data!

Leveraging SQL & Postgres for our Database

- AWS database used to store all of our exploratory data so anyone on the team can access it at anytime.
- We are using Postgres (pgAdmin) to connect to the AWS database.
- Cleaning will be done outside of Postgres
- Database is for clean final exploratory data only





www.quickdatabasediagrams.com

Players

player_id varchar
player_name varchar
player_abbr varchar
player_status boolean

birthdate date retirement_date date

Player_attr

Points

player_id varchar player_position varchar team_id varchar team_abbr varchar from_year int int to year player_salary double int games_played int player_injuries

long

Teams

team_abbr

team_city

team_state

team_owner

team_manager

team_year_founded

varchar varchar

varchar

varchar

varchar

varchar

int

Seasons

seasons_id • varchar

game_date date

Games

home_team_id varchar home_team_abbrev varchar

away_team_id varchar away_team_abbrev varchar

game_date date

WL home boolean

WL_away

home_points

goals_home goals_away

boolean

int

int

int

int

int

fta_home fta_away

away_points int



We Identified 4 Key Areas for Data Sourcing

Kaggle

TGFK: Thank goodness for Kaggle!

Contains massive amount of clean datasets that fits our needs.

Contains previous analysis we can build upon

NBA-API (nba.stats.com)

Used to extract more recent data to build upon existing Kaggle data

Can obtain raw form of data that will need wrangling

fivethirtyeight

Contains RAPTOR data that is a new metric to measure basketball stats.

Contains analysis for dataset like kaggle.

espn.com

Web Scraping needed

Contains salaries

Has a simple layout of leaderboards with stats of players/teams

Final Dashboard Interactive Elements



With our model in place, our vision is that users can create a team of NBA players, and receive the likelihood of that team to win!

This estimation will be calculated by understanding the players statistics, injury history, and more!



What does it take to win an NBA Championship?

The final dashboard will include an interactive model where users can create their own NBA team.

This estimation will be calculated by understanding the players statistics, injury history, salary, and more!





Thank You.

