



# “AI Predicts NBA Champions!”

- [Your favorite Sports News channel]
- Team Jake^2 / Group 3



# Win big by using AI to predict game outcomes

- Utilize AI to predict the results of each matchup in the NBA 2024 Tournament
- Include data points that are hard to correlate such as:
  - Game location
  - Altitude
  - Rest time
  - Injury
  - Player stats
- Multiple outputs, such as:
  - # of matches in the series
  - Series outcome



# Challenges we faced

- Source of truth for data
  - Sports data is everywhere, but finding the right source was challenging
- Take time to understand the (Entity Relationship Diagrams) ERD's of your API if using one
  - Assume nothing....
- Being an (Subject matter expert) SME in what you're predicting
  - You have to understand the game to predict it

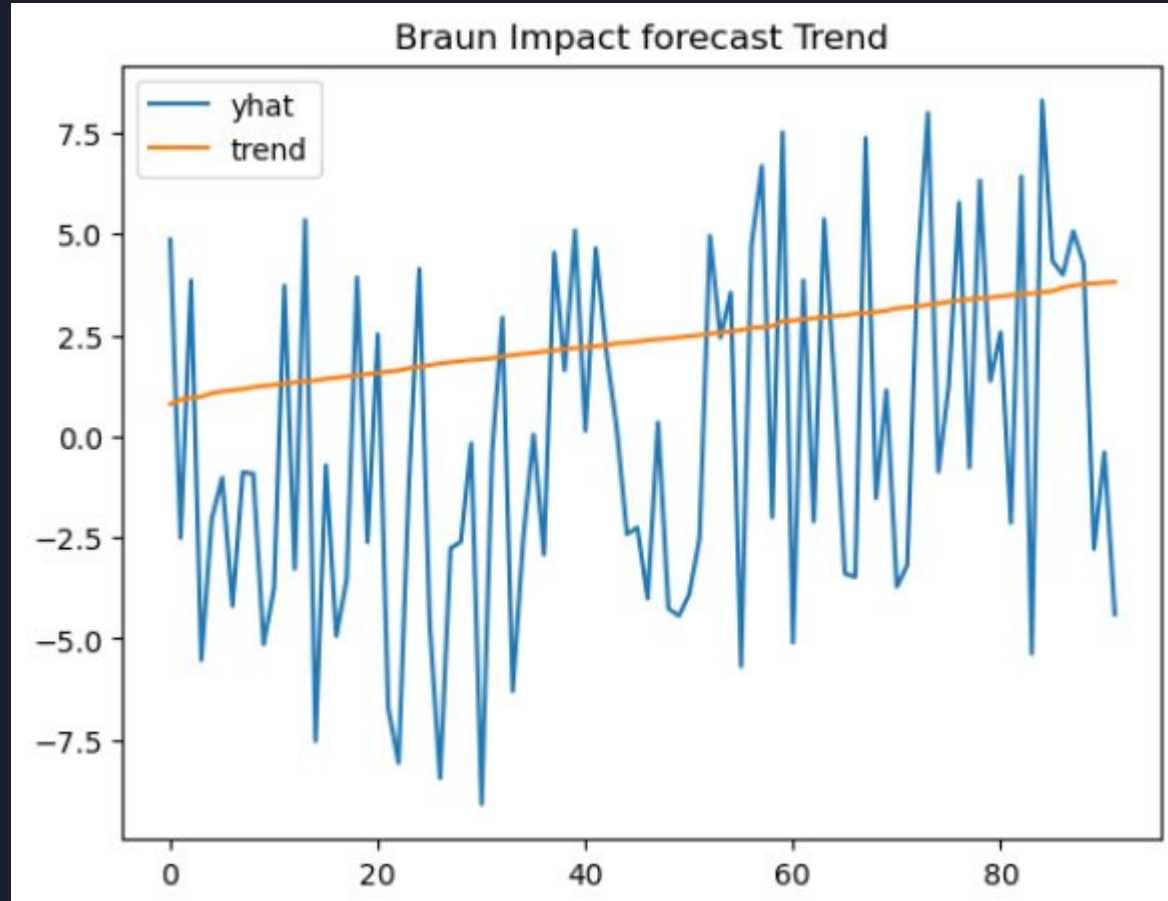


# Output

- We compared 2 matchups: Nuggets vs Timberwolves and Celtics vs Cavs
  - These series have been going on during our project. So we have compared our results as the games have gone on.
- If given more time we would build a repeatable process
  - It would pass in the matchups for each round of the tourney and the winners would move onto the next series to run the model again.
  - We could then predict the team to win the NBA finals.

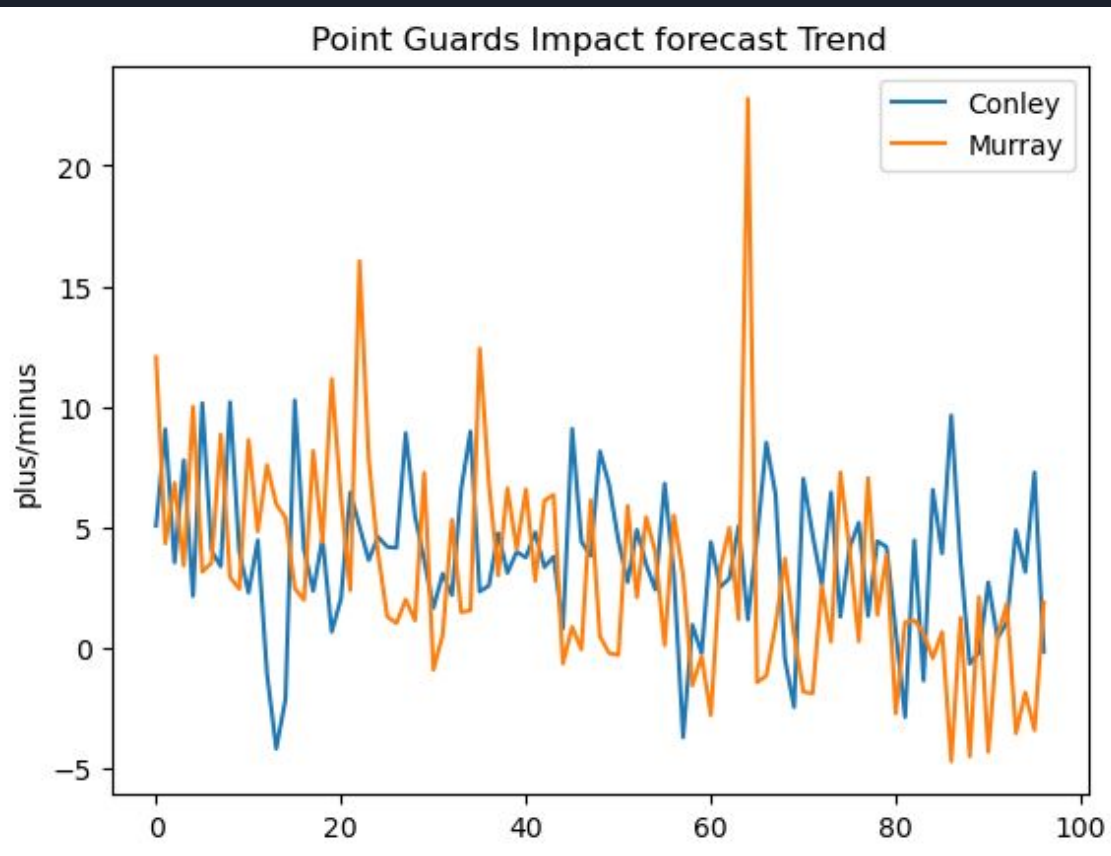
# Player Analysis

Plus/Minus Stat (PM): Reflects how the team did while that player is on the court. If a player has a +5 PM, it means his team outscored the opponent by 5 points while he was on the court. If he has a -3, then the opposing team outscored his team by 3 points while he was on the court.



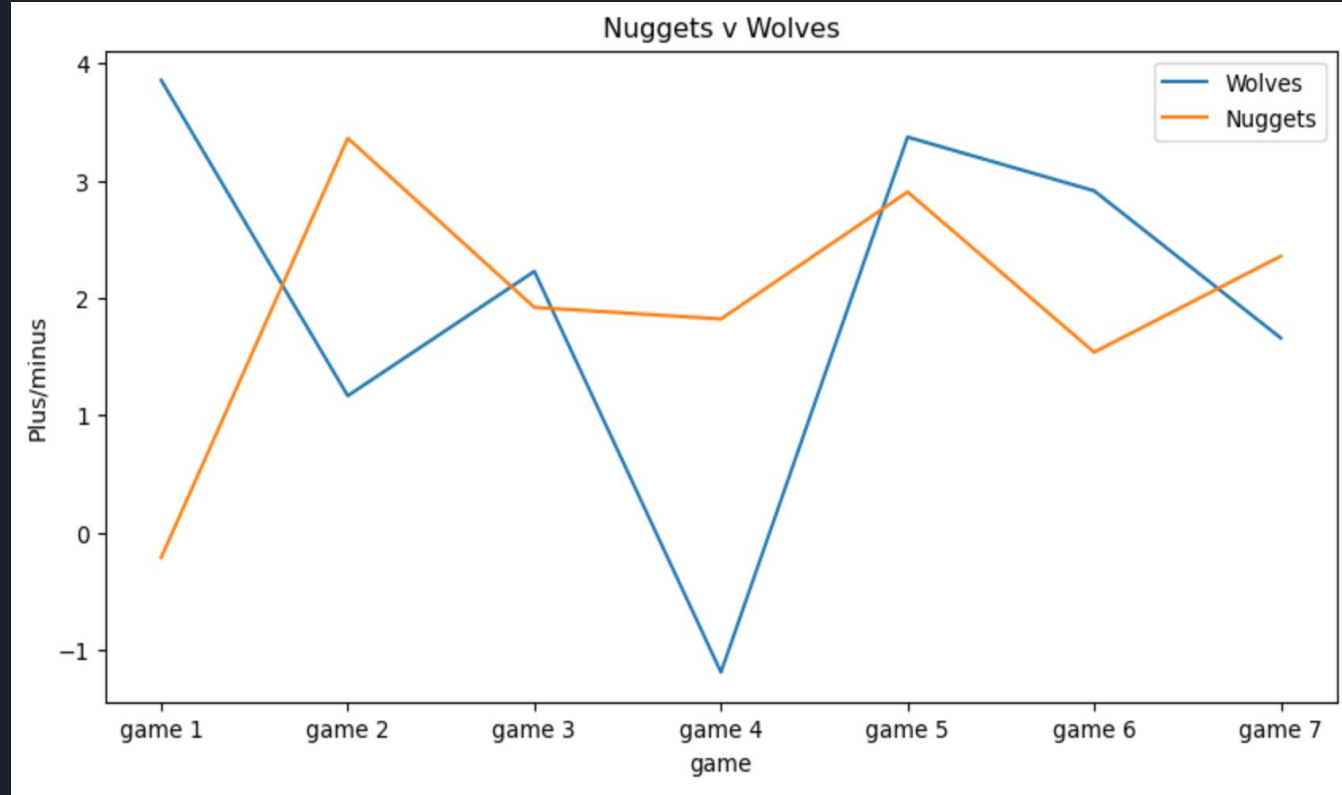
# Player Comparison

- Individual player Plus/Minus
- We then built this across the 2 competing teams to determine a winner.

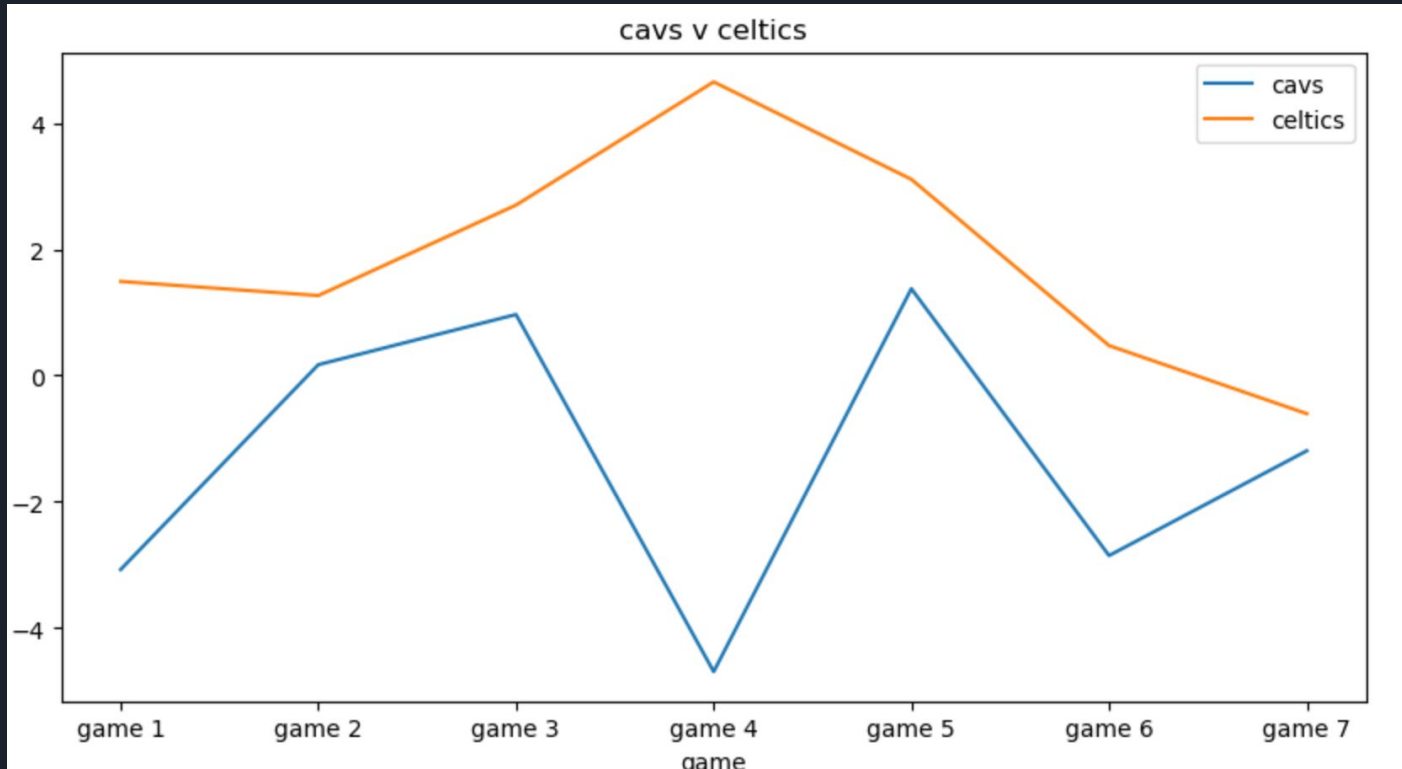


# Team Comparison- Nuggets vs Wolves

- Team Plus/Minus stat
- The higher stat would be the winner of the game.



# Team Comparison - Cavs vs Celtics







# Results

And the winners are.....



Our model predicted the Wolves to win in 6 games when in reality the Nuggets are up 3-2

Game #	Reality	Stats (Wolves - Nuggets)	AI Prediction
1	Wolves	$3.85 > -0.21$	Wolves
2	Wolves	$1.16 < 3.36$	Nuggets
3	Nuggets	$2.26 > 1.92$	Wolves
4	Nuggets	$-1.19 < 1.82$	Nuggets
5	Nuggets	$3.37 > 2.90$	Wolves
6	Future Game	$2.91 > 1.54$	Wolves
7	Future Game	$1.66 < 2.35$	Nuggets



Our model  
predicted the Celtics  
to win in 4 games  
when in reality they  
won in 5

Game #	Reality	Stats (Cavs - Celtics)	AI Prediction
1	Celtics	$0.17 < 1.49$	Celtics
2	Cavs	$0.97 < 1.27$	Celtics
3	Celtics	$-4.69 < 2.70$	Celtics
4	Celtics	$1.37 < 4.65$	Celtics
5	Celtics	$-2.85 < 3.11$	Celtics
6	N/A	$-1.19 < 0.47$	Celtics
7	N/A	$-3.18 < -0.60$	Celtics



Questions?