

# What Drives Winning in the NBA?

Data-Driven Insights from  
Player and Team Performance

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# Dataset Overview & Business Context



Large NBA dataset containing player-level and team-level game statistics

## Dataset Details

- ★ Data: 80 Years - 1.6M Records
- ★ Attributes: 20+ Performance Fields
- ★ Grain Levels: Player, Team, Game

## Business Relevance

Mirrors how NBA front offices, coaches, and analysts evaluate performance and enables data-driven decisions in:

- ★ Player Development
- ★ Roster Construction
- ★ Game Strategy
- ★ Performance Evaluation

# Data Wrangling & Preparation



## Initial Data Processing

- ★ Raw NBA data ingested from source files into a relational database
- ★ Data inspected for completeness, consistency, and structure

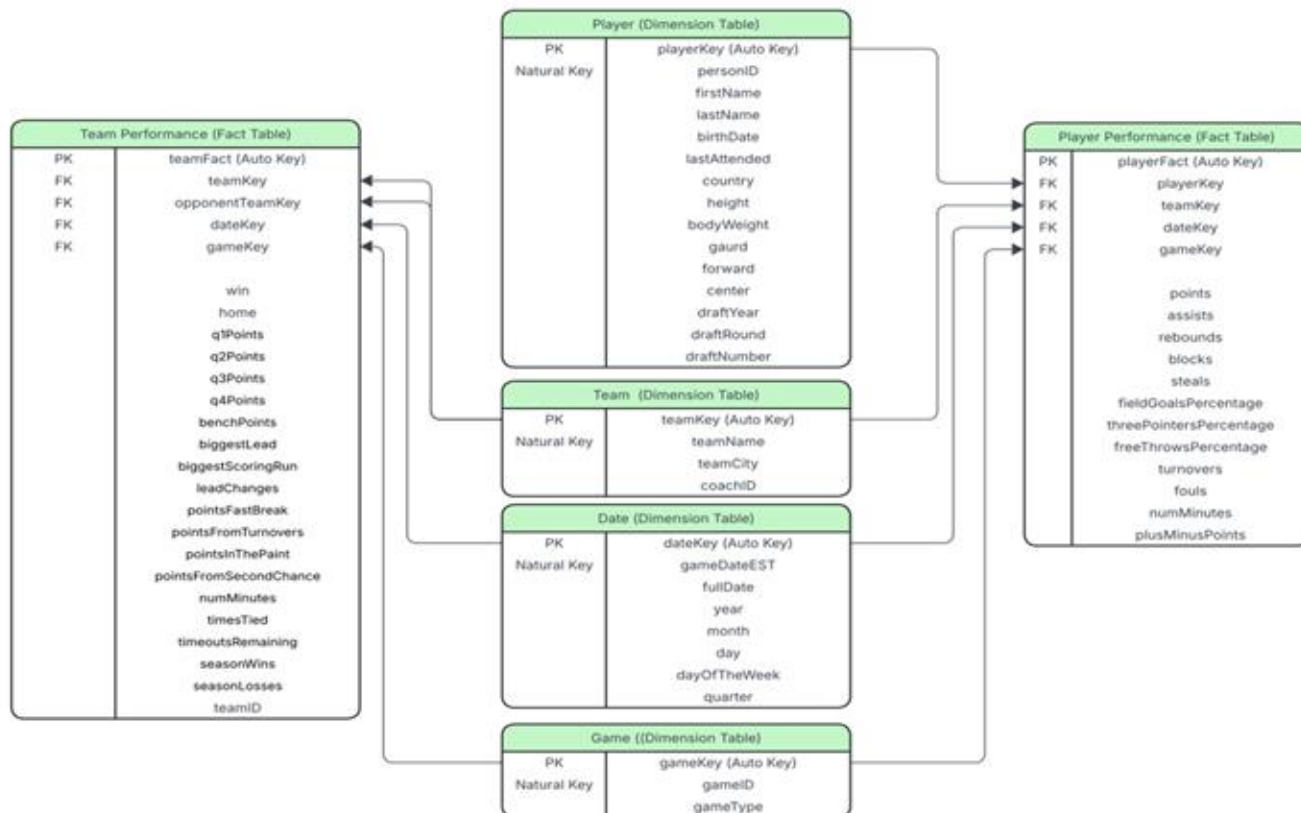
## Cleaning & Filtering

- ★ Removed duplicate and incomplete records
- ★ Standardized team names, player identifiers, and game IDs
- ★ Filtered data to include valid NBA games and players only

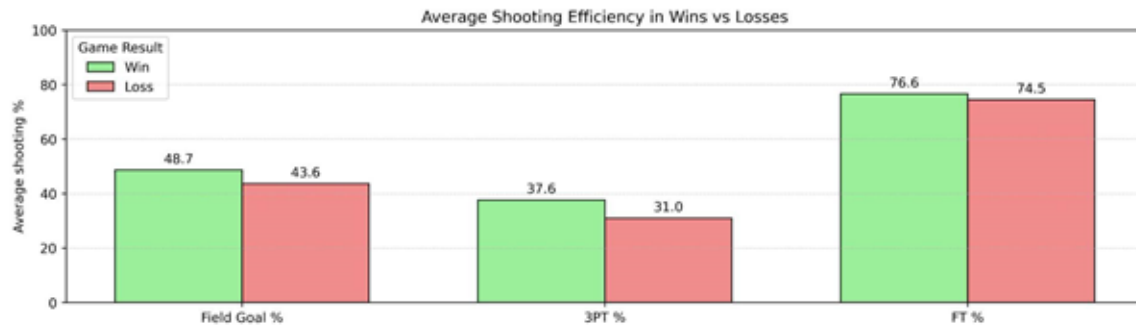
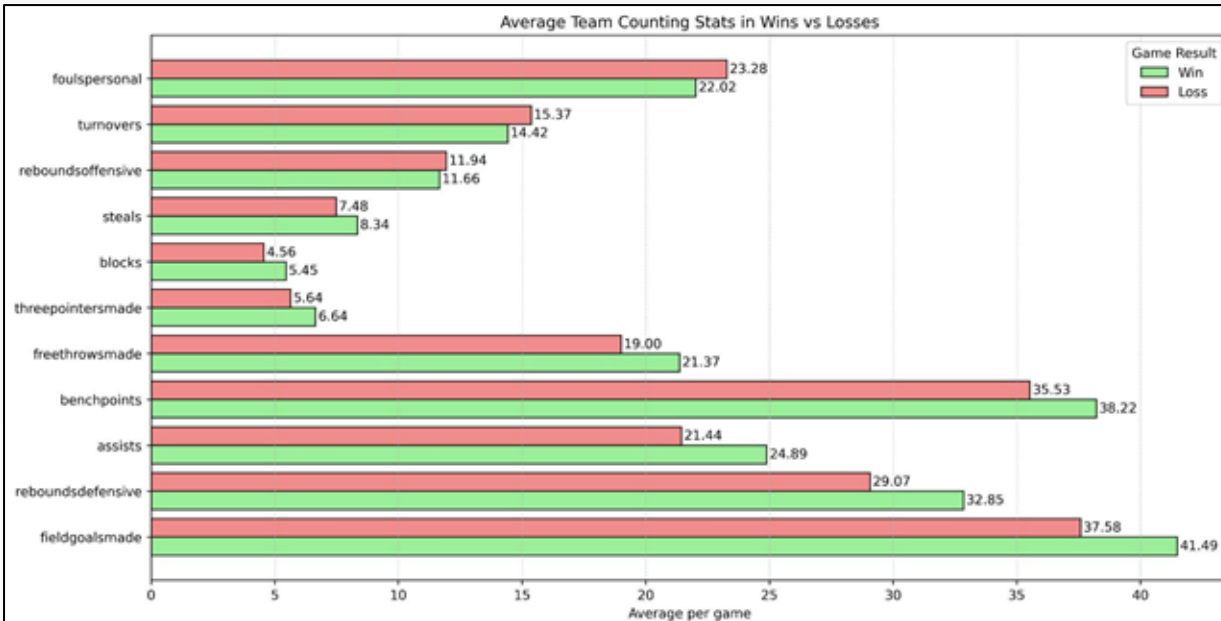
## Transformations & Aggregation

- ★ Converted raw game logs into player-level fact records
- ★ Aggregated player statistics to derive team-level metrics
- ★ Verified record counts before and after transformations

# NBA Data - Star Schema



# What Separates Winning Teams from Losing Teams?



This visual highlights the most consistent “winning” stats across all games:

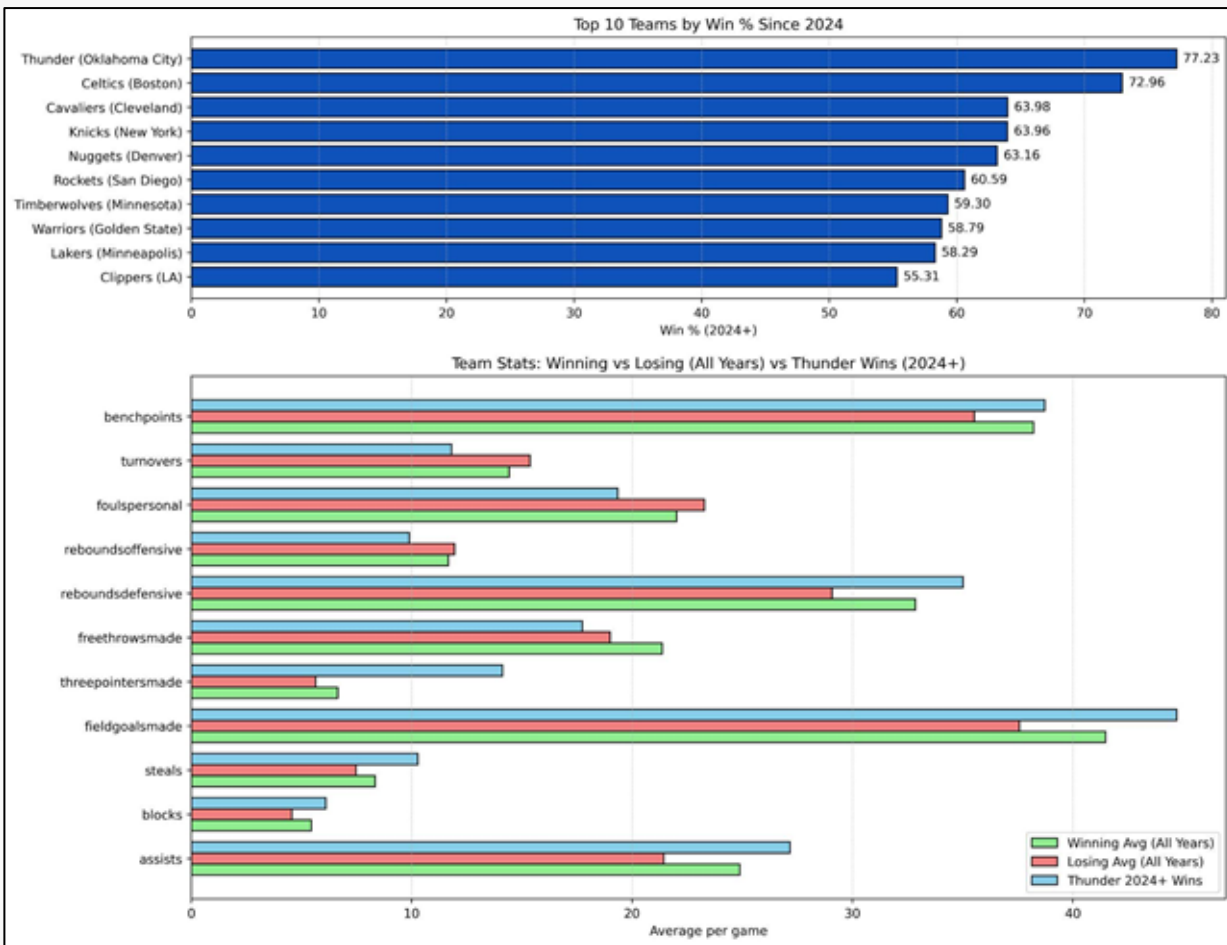
- ★ More Field Goals & 3PTs
- ★ More Assists
- ★ More Defensive Rebounds
- ★ More Bench Depth
- ★ Less Fouls and Turnovers

## Business takeaway

Sponsors perspective:

- ★ Performance informing visibility
- ★ Informs choice of partnership

# Case Study: Oklahoma City Thunder - A Winning Profile



## Why Team Thunder?

Highest win percentage (77%) among all teams since 2024 and serves as a benchmark for a high-performing team

## Key Insights

Thunder confirms winning team observations.

- ★ Higher than average in 3PTs, assists, field goals made, and defensive rebounds
- ★ Lower than average in turnovers and fouls

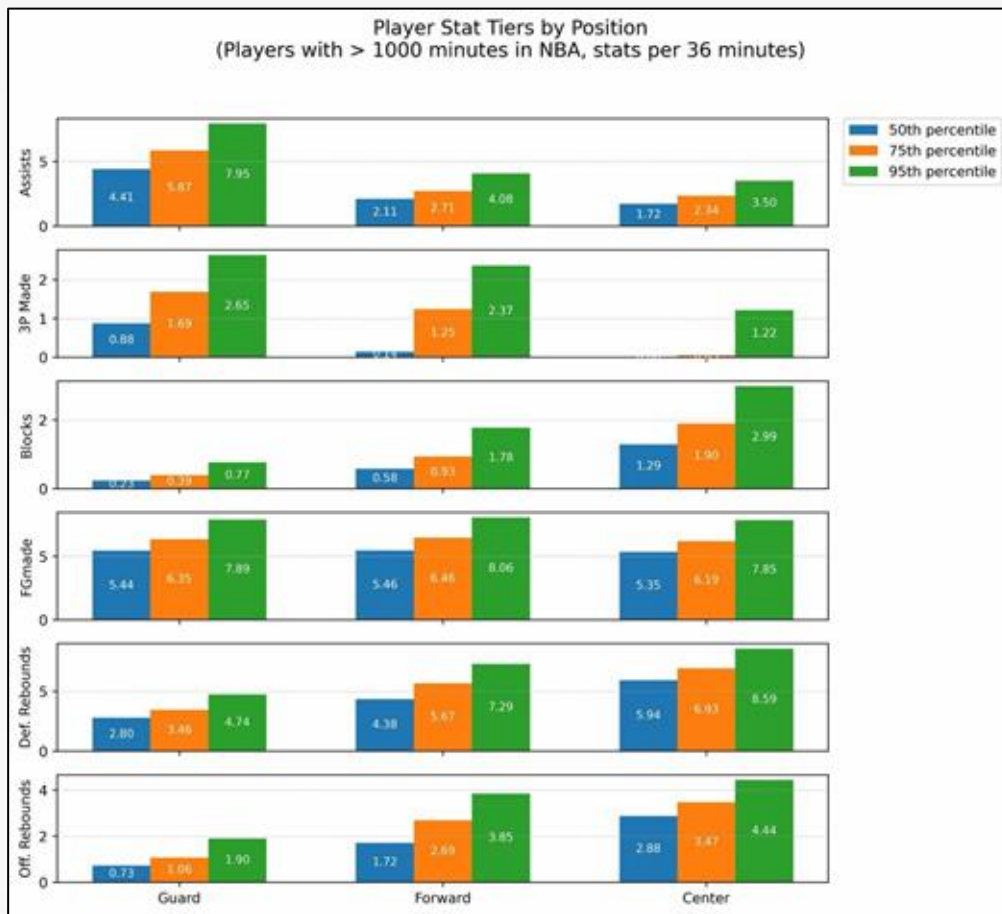
## Business takeaway

Team Manager perspective:

- ★ Wins drives ticket revenues
- ★ Higher media rights revenues



# What are key player performance stats for each position?



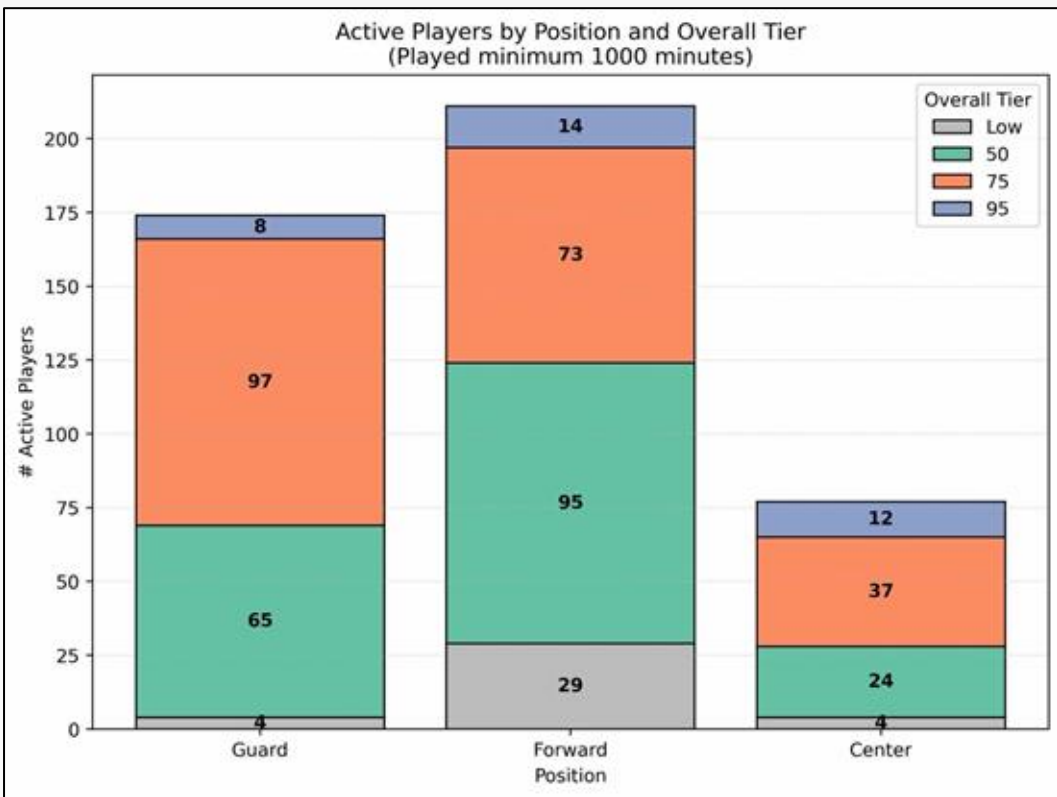
**This visual sets clear benchmarks for the stats shown, by position. It includes only players with minimum 1000 minutes of total game time**

- ★ Guards - Assists and 3P Made
- ★ Forwards - Rebounds and Field Goals
- ★ Centers - Blocks and Rebounds

## Business takeaway

- ★ Owning top talents impacts marketing revenue
- ★ Benchmarking informs player endorsement decisions

# How is the overall performance of currently active players?



**Overall tiers were made based on the benchmarks and position based percentile stats identified earlier**

- ★ Few in Tier 95 : Guard 8; Forward 14; Center 12
- ★ Forwards show the broadest depth in the middle tiers: Tier 50 = 95; Tier 75 = 73
- ★ Clear groups for decision-making: This separate players into performance tiers within each position

## **Business takeaway**

- ★ Player performance distribution by position helps plan drafts and player selection
- ★ Informs budgeting strategy by position



# Summary



**Our 80-year NBA dataset allowed us to create a winning team and top player benchmarks that can be used for strategic decisions in Sports Management.**

## **Team Manager Standpoint:**

- ★ Knowing performance drives revenues in ticket and media rights
- ★ Higher performance brings in more people in arena and watching live.
- ★ It's a crucial metric to pinpoint better cost planning for training and staff member choice.
- ★ It helps manage marketing plans and choice with their top talents.

## **Sponsorship Point of View:**

- ★ Performances helps in identifying the best team or player for visibility,
- ★ It impacts marketing planning and budgeting.
- ★ Player performance benchmarks informs endorsements and campaigns decisions.