



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

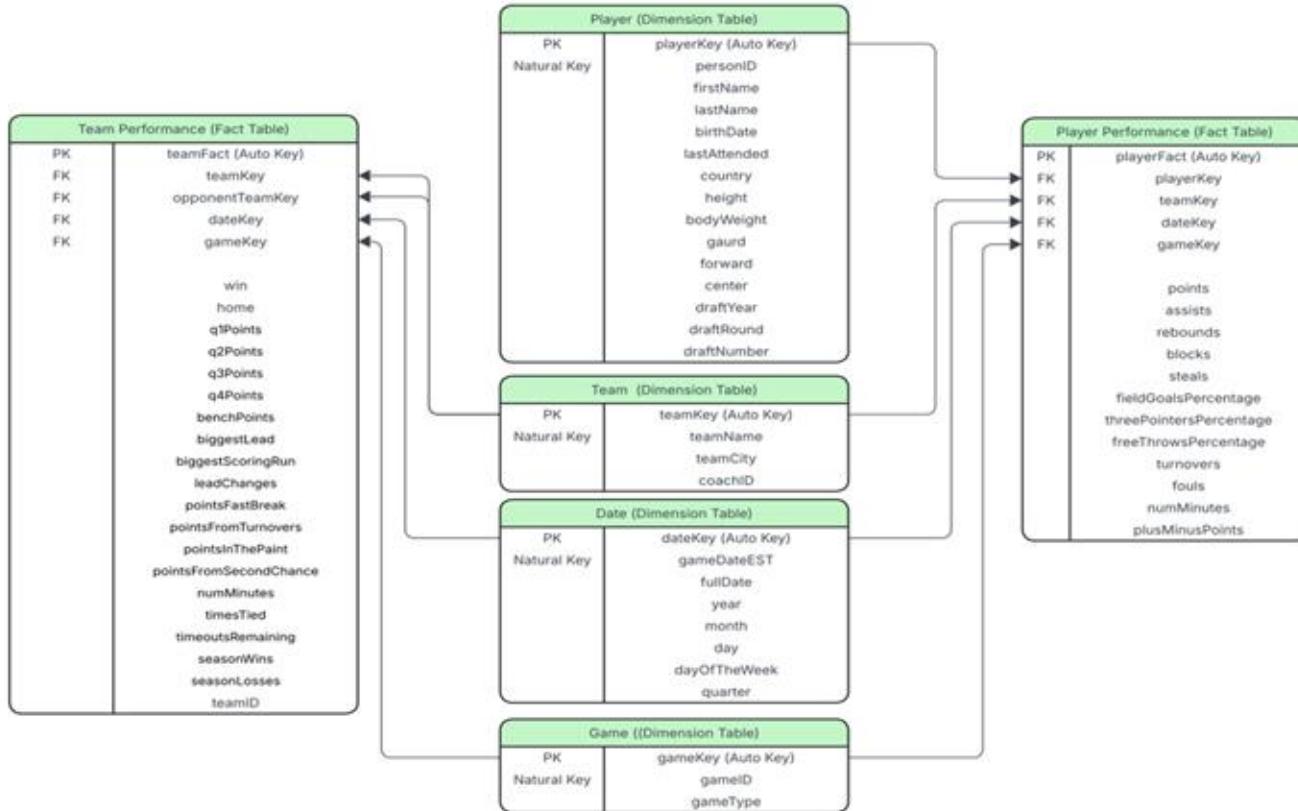
- ★ Removed duplicate and incomplete records
- ★ Standardized team names, player identifiers, and game IDs
- ★ Filtered data to include valid NBA games and players only

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

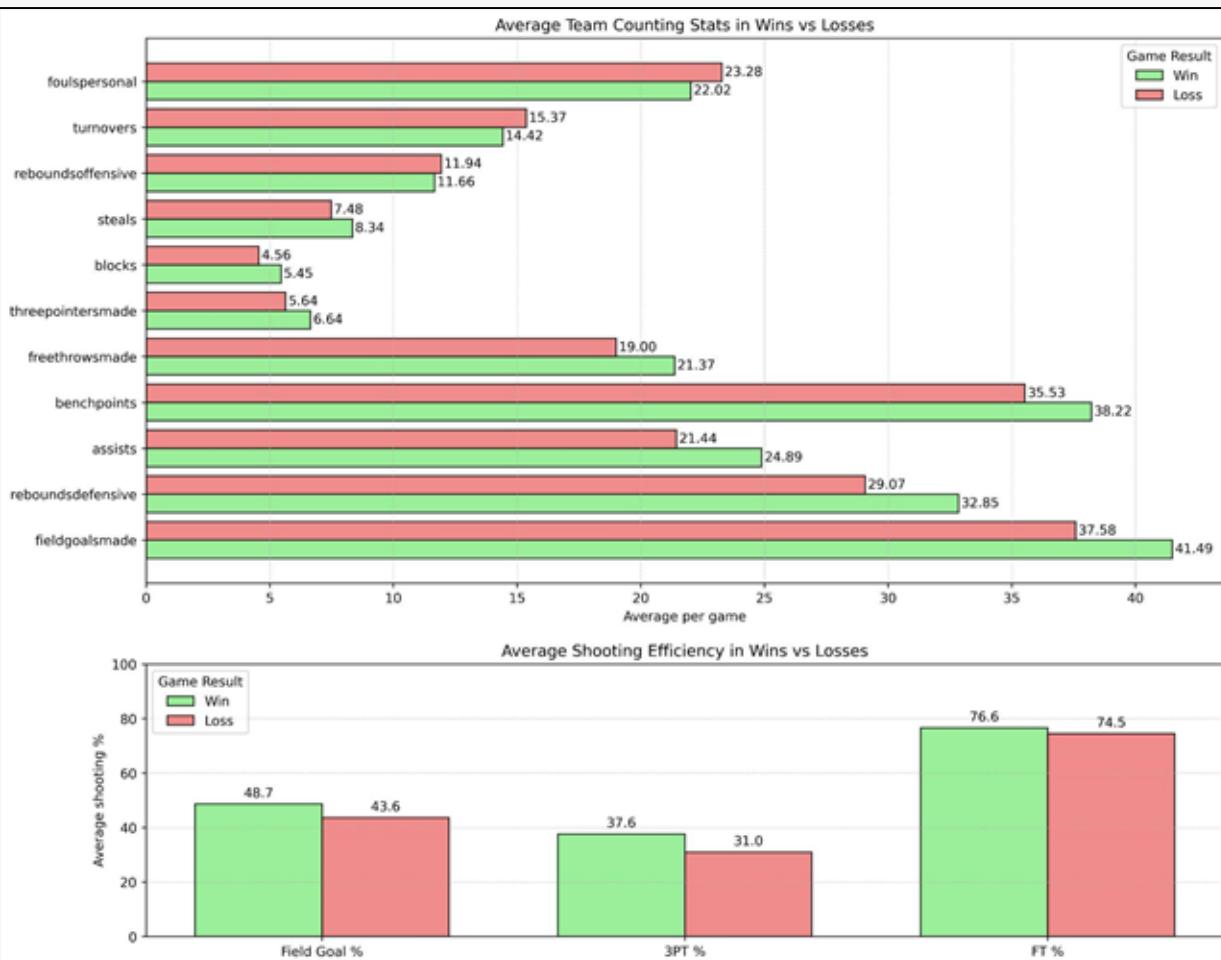


NBA Data - Star Schema





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

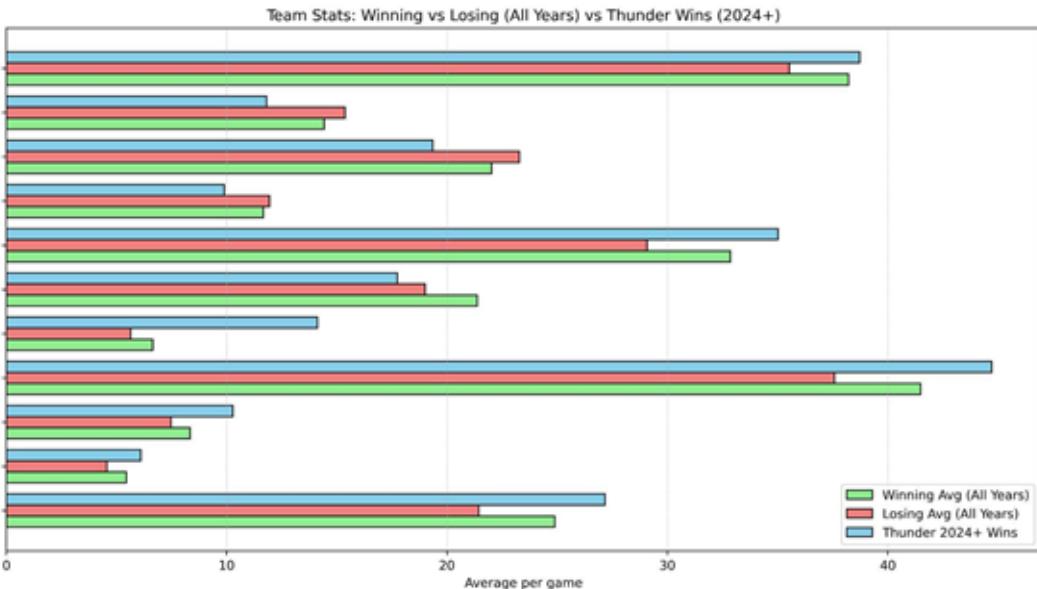
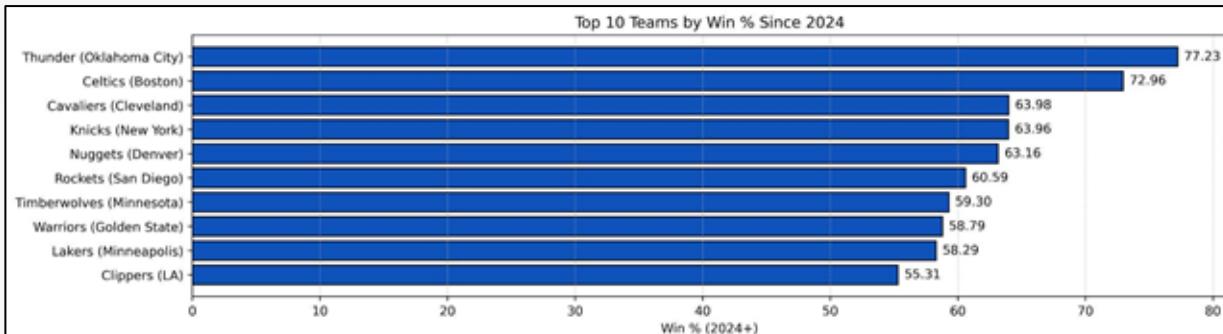
Business takeaway

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

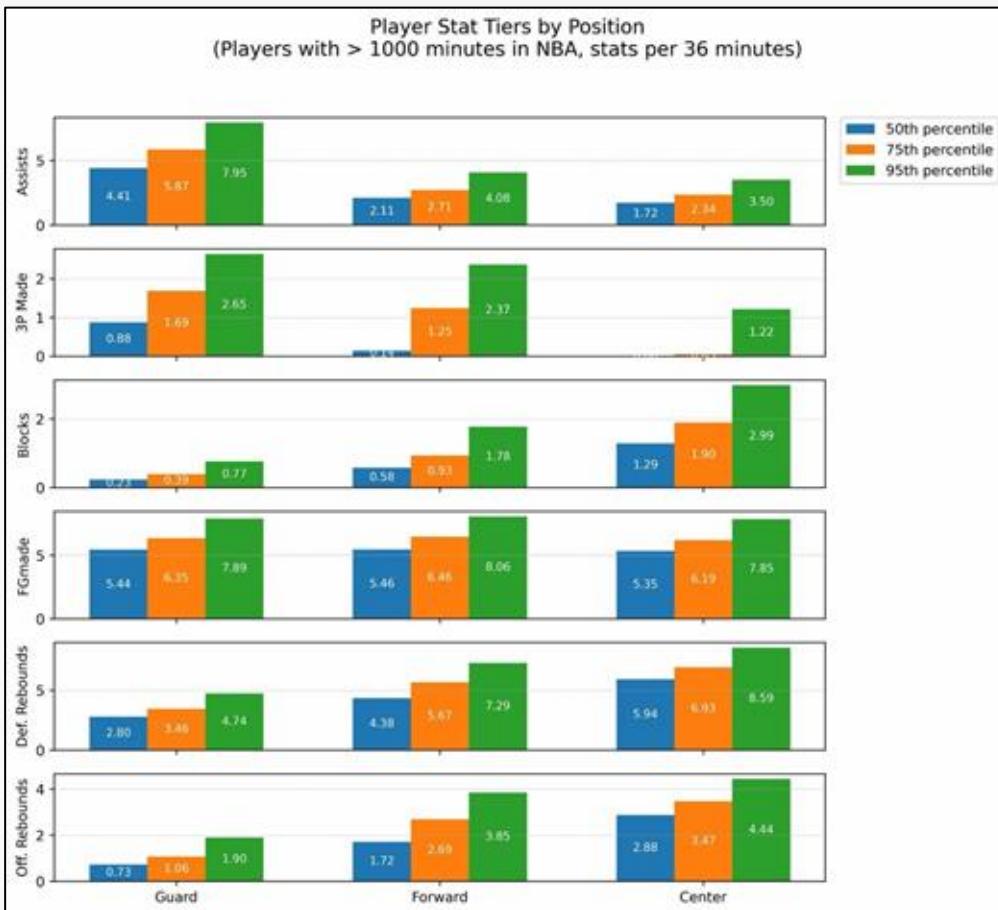
Business takeaway

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

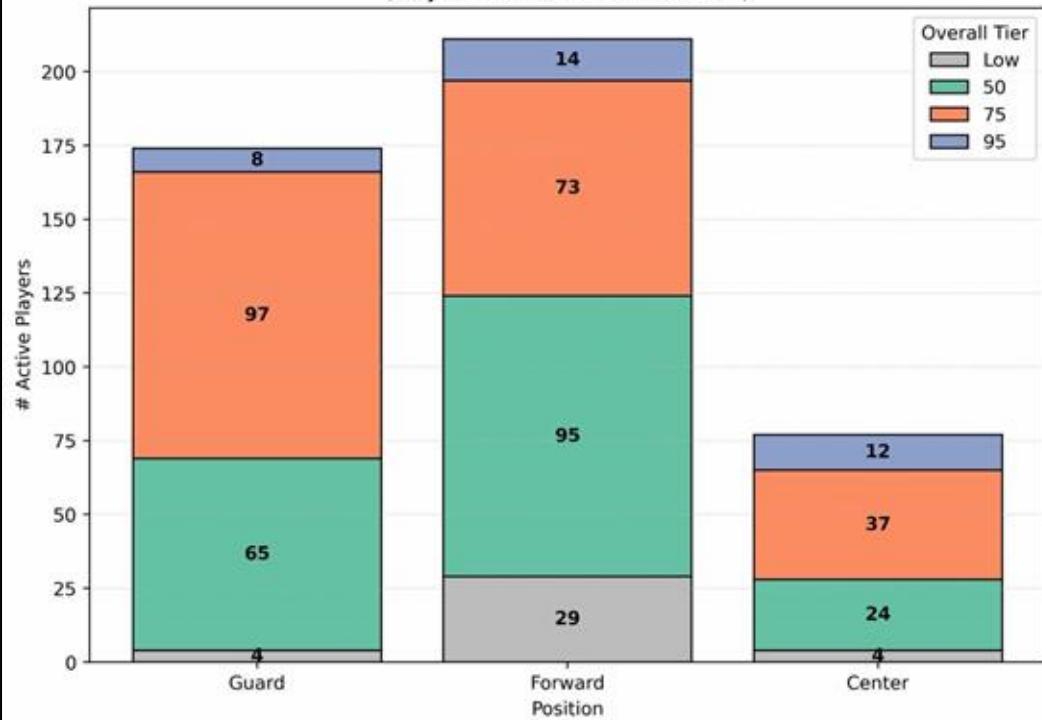
Business takeaway

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



How is the overall performance of currently active players?

Active Players by Position and Overall Tier
(Played minimum 1000 minutes)



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.