



Trends and Transitions: NCAA Basketball Player Performance in the NBA

Analyzing Performance Trends and Gap



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01

Motivation

What drives us to the project?

Our motivation for this project

Market value \$9.54 billion in 2024
2nd popular sport in the US
With 171.1 Million fans

Basket Industry



Increase the success
rate for young
players in NBA

Transition



NCAA Matters

Popular Games
Players Incubator





02

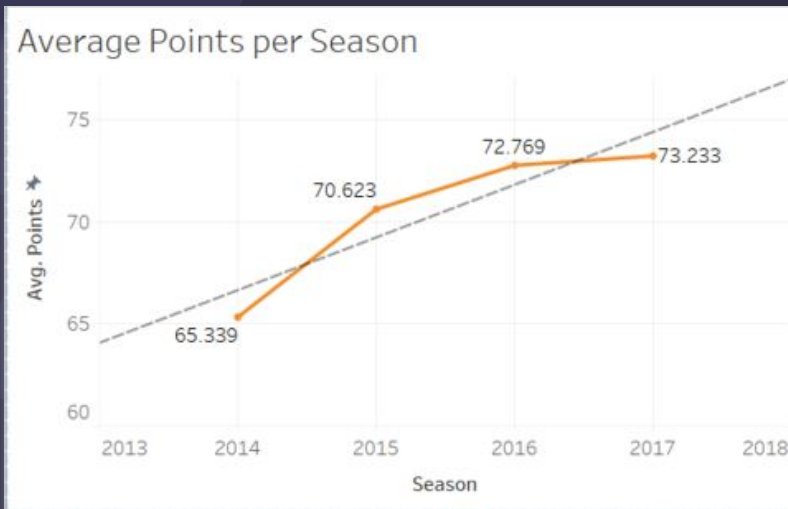
THE TRENDS

Trends in NCAA from 2014 to 2018

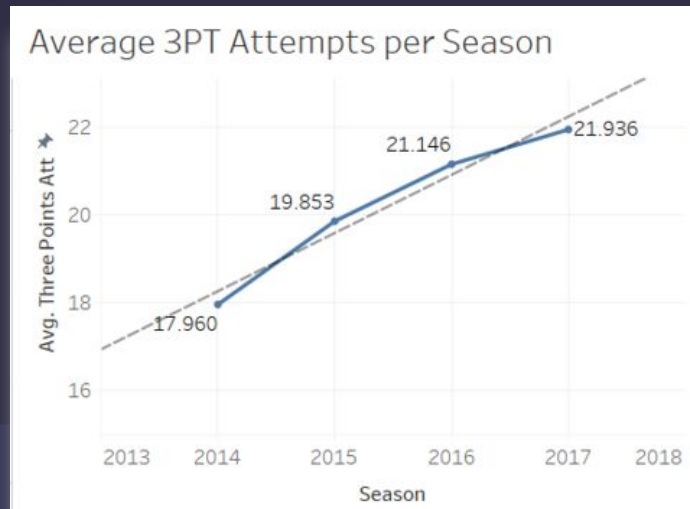
The Shift in How Basketball is played



Higher Scoring Games



Increased Three-Point Attempts



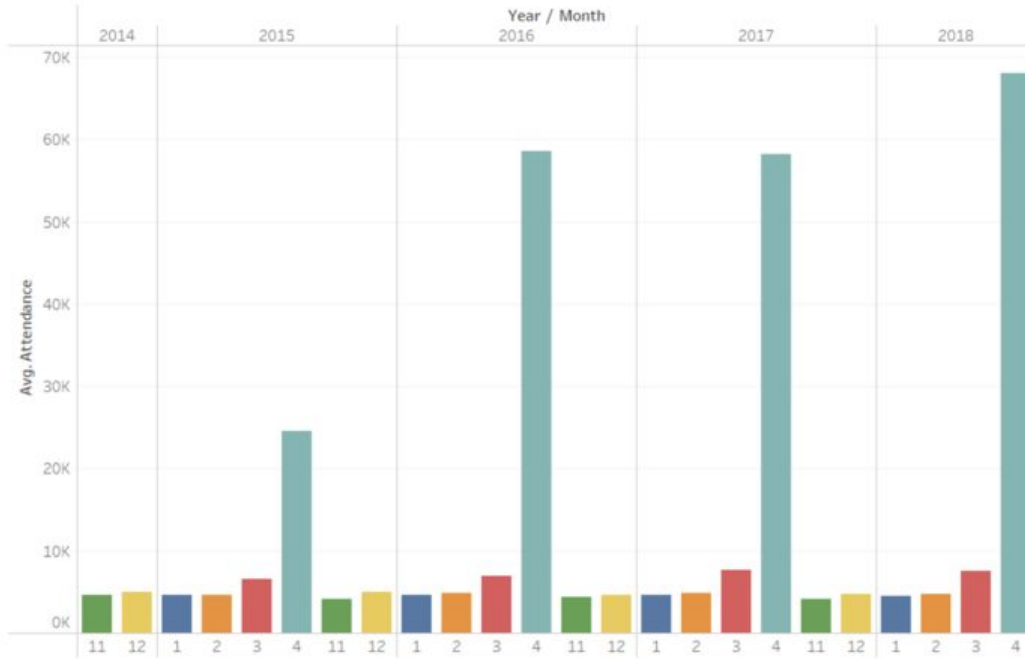
- *Analytics-Driven Strategies:* Teams have shifted focus toward efficient scoring methods, such as three-point shooting, as a result of modern analytics.
- *Impact on Player Roles:* Greater emphasis on three-point shooting has reshaped team dynamics, prioritizing shooters and spacing over traditional interior play.

The Shift in How Basketball is Played



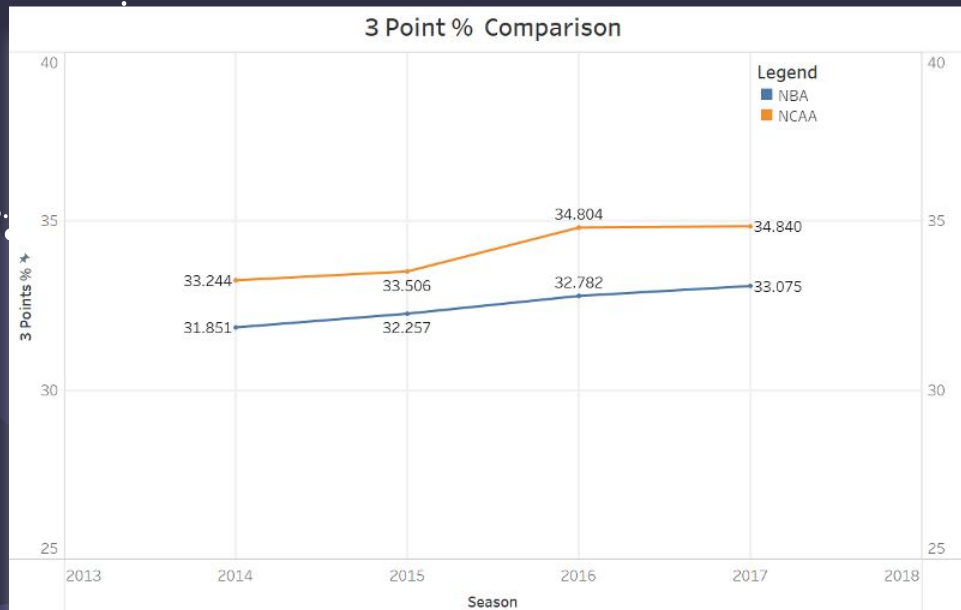
Increasing Attendance

NCAA Average Attendance 2014-2018




- *Style of Play: Faster-paced, high-scoring games have attracted larger audiences, making basketball more appealing to both long-time fans and new spectators.*
- *Fan Connection: Teams' adoption of exciting offensive strategies, such as three-point shooting, has enhanced the entertainment value of the game.*
- *Business Opportunities: Growing attendance reflects a broader trend of increased marketability and sponsorship potential for basketball as a sport.*

NCAA vs NBA: 3-Point Shooting Performance



NCAA players consistently exhibit slightly higher 3-point percentages

The NBA requires adaptation to longer distances and tighter defenses

 **Key takeaway:**
Evaluating shooting mechanics and adaptability is critical for predicting NBA success

NCAA vs NBA: Field Goal Efficiency

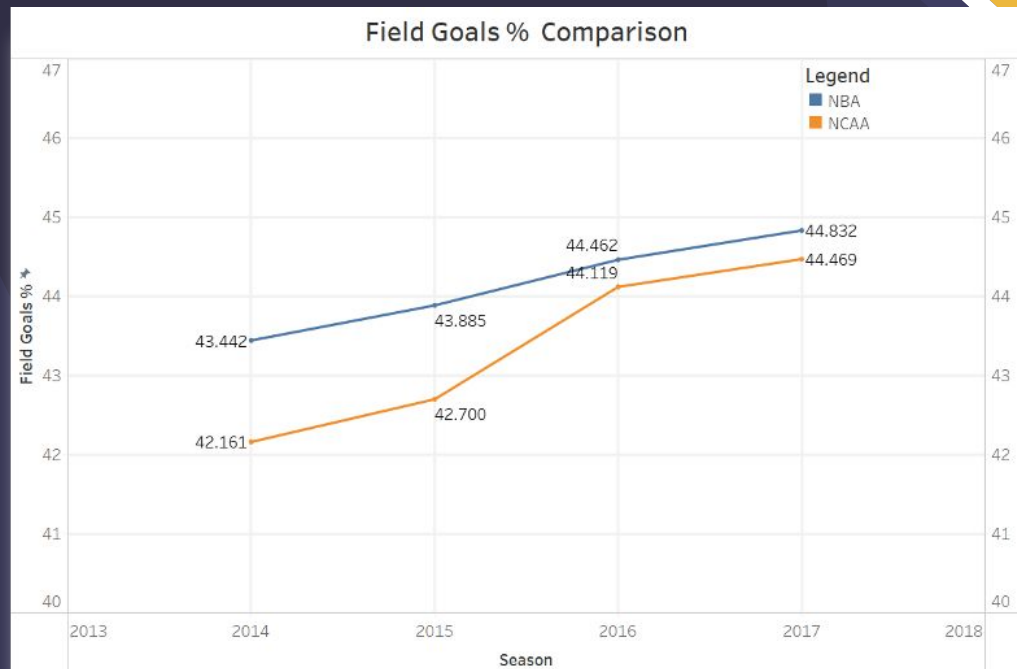
Field goal percentages between NCAA and NBA are closely aligned

Strong shot selection and finishing ability in college often translate well to the NBA



Key takeaway:

Players with consistent efficiency in NCAA are reliable candidates for success in the NBA



03

Players Performance

Using an innovated **Magic Formula** to evaluate plays performance in NCAA vs NBA



Player Performance Accumulator Formula



Avg/Season



Rank Each Player



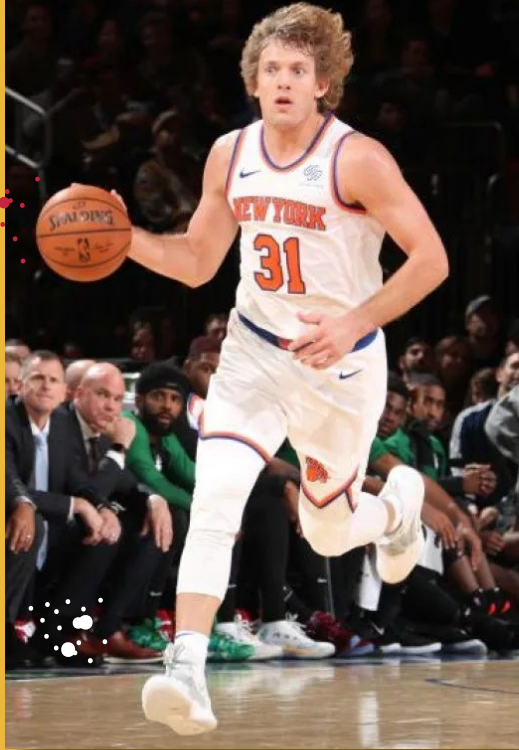
Give Ranking Scores:
Top Ranking ≈ 0
Low Ranking ≈ 1



Sum Scores for Players

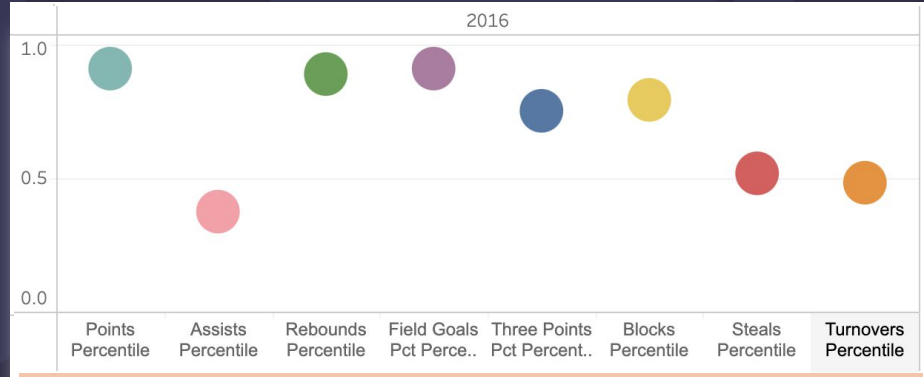
The score values for players: the lower the better!!!

Overrated Player: Ron Baker



Ranking in **NCAA** V.S. **NBA**

2013	2014	2015	2016
Top 7	Top 1	Top 11	Top 322

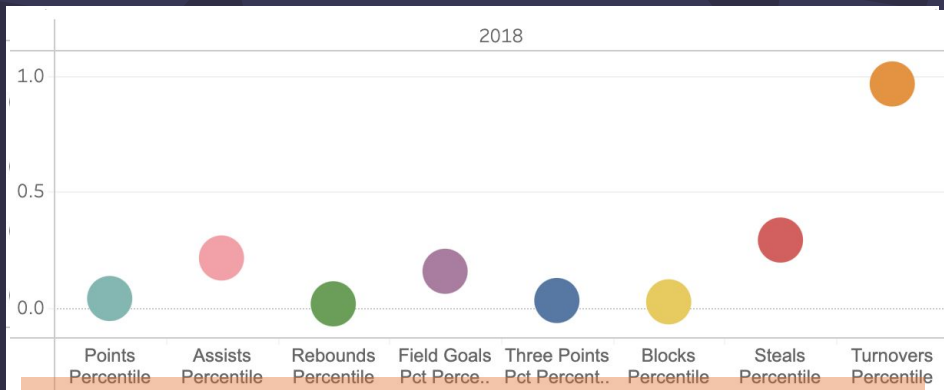


The score values for players: the lower the better!!!

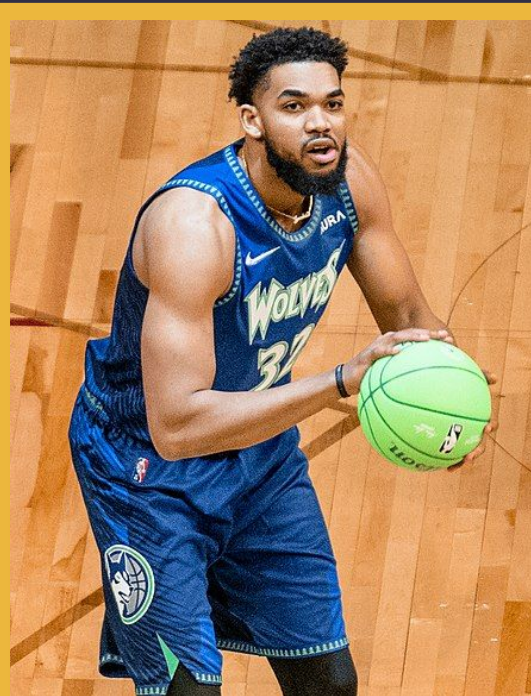
Underrated Player: Karl-Anthony Towns

Ranking in **NCAA** V.S. **NBA**

2014	2015	2016	2017	2018
Top 514	Top 13	Top 8	Top 3	Top 2



The score values for players: the lower the better!!!



Fairly Rated Player: Aaron Gordon



Ranking in NCAA V.S. NBA

2013	2014	2015	2016	2017	2018	2019
Top 5	Top 238	Top 54	Top 104	Top 27	Top 48	Top 87



The score values for players: the lower the better!!!

Dashboard

Let's explore more...





04

Summary

Our recommendation and future steps



Recommendations



Matchup Planning

Leverage the Magic Evaluation Formula for better matchups



Talent Evaluation

Identify undervalued players (e.g., Karl-Anthony Towns) and improve draft, trade, and free agency decisions



Media & Marketing

Use data to optimize game scheduling, boost viewership, and plan marketing campaigns

Future Steps

**Bring in More
Comprehensive Data**

Develop tools integrating machine learning and predictive analytics to refine metrics.

Apply to the Field

Collaborate among stakeholders (coaches, scouts, executives) for innovation and enhanced competitive advantage.

Sustainable Success

Use insights to create adaptable frameworks for sustainable success in modern basketball.



THANKS!

Do you have any questions?