

Ethan Lowe

MTH 2300

March 17, 2024

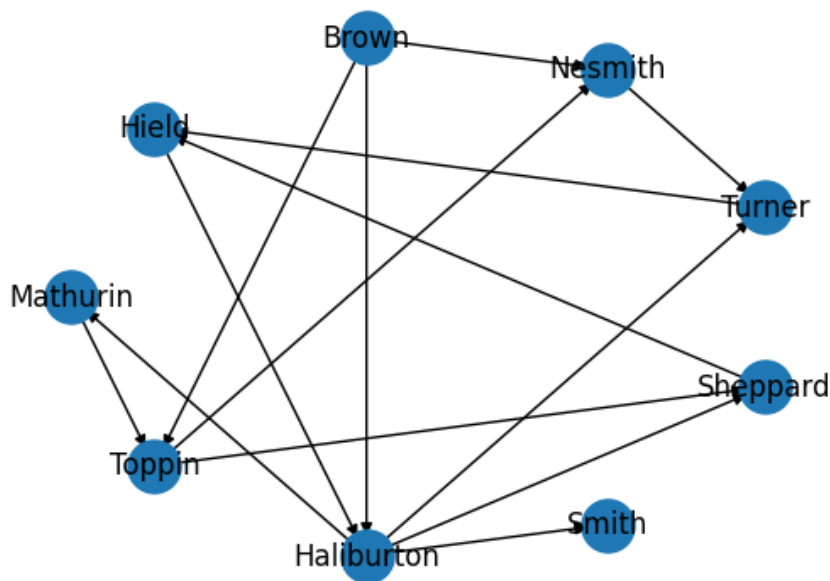
Breaking Down the Indiana Pacers' Historic Offensive Efficiency

In the 2023-24 NBA season, league-wide offensive efficiency has been at an all time high in comparison to every other season in NBA history. With this year's teams having an offensive rating of 115.4, breaking the previously set league record of 115.1 from the 2022-23 season. One of the teams leading the charge is the Indiana Pacers with an offensive rating of 123.0 before the all star break, falling several spots in terms of offensive efficiency after the break due to the hamstring injury of the team's star player: Tyrese Haliburton. The Pacers have been stated to play with an extremely fast pace by numerous NBA analysts and commentators, their offense essentially running through Tyrese Haliburton who is currently averaging the most assists out of any player in the league with 11.2 assists per game. For this case study we will be analyzing the Pacers' assist data from one of their most efficient games on offense, their 157-152 victory against the Atlanta Hawks on November 21, 2023 during the group stage of the NBA season tournament. The assist data for the Pacers' win against the Houston Rockets on February 6, 2024 will also be analyzed to see how the teams' offensive connections have changed since the injury of Tyrese Haliburton, and acquisition of all star Pascal Siakam in the trade that saw them trade away players Bruce Brown and Jordan Nwora.

Our methods of looking at this data will be to track each player's assists and who they pass to, and from there we will put it into a data frame, grab the gramian matrix of that data and

visualize it to show which players not only dish out the ball to the most amount of players, but also which players tend to receive the ball the most from a variety of different teammates.

With the first game against the Hawks, the Pacers had a total of 35 assists, 16 from star player Tyrese Haliburton. Calculating our gramian matrix and graphing said matrix results in the following figure:

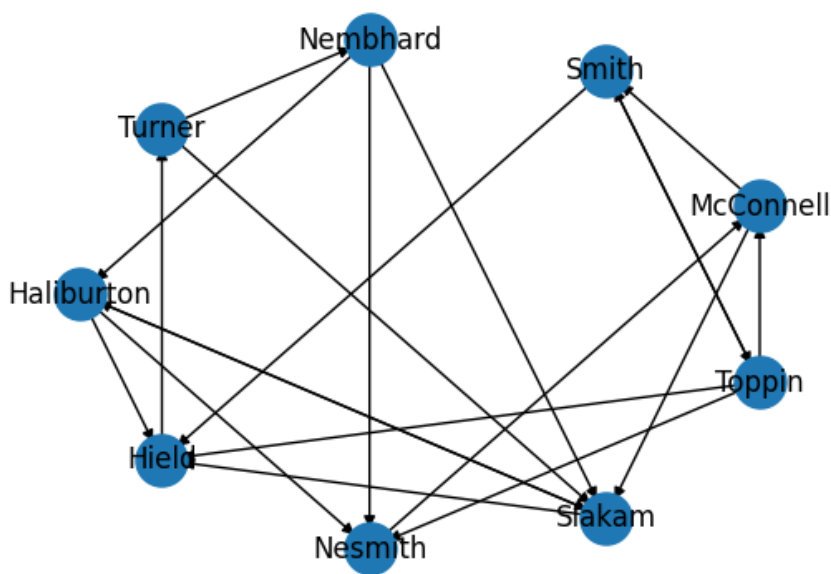


Players Isaiah Jackson and T.J. McConnell were removed from the data set due to them either not receiving any passes to credit another play for an assist, or the fact that they themselves did not record any assists for that game. From this figure we can see that the Pacers tend to target players Obi Toppin, Tyrese Haliburton, and Buddy Heild more so than other players. Surprisingly enough, Myles Turner was not targeted as frequently despite his unique ability of spacing the floor and shooting the three as a 6 '11 center. Rookie Ben Sheppard made the most of his minutes, being an unselfish teammate and finding Obi Toppin and Buddy Heild for the buckets. Unsurprisingly Tyrese Haliburton seemed to get assists from the following players: Jalen Smith (1), Benedict Mathurin (1), Obi Toppin (4), Bruce Brown (3), Aaron

Nesmith (2), Buddy Heild (3), Ben Sheppard (1), and Myles Turner (1), missing only T.J.

McConnell and Isaiah Jackson in getting an assist from every player who played that game.

Looking at our next game, the Pacers' 132-129 victory against the Houston Rockets on February 6, 2024, this contest happened after the Pacers' acquisition of all star Pascal Siakam but before the traded away Buddy Heild. We see a similar offensive efficiency with the Pacers having a total of 35 assists. Resulting in a gramian matrix that looks like this:



For this contest, it would seem that new starter Aaron Nesmith got a lot of the attention previously given to Obi Toppin, receiving assists from three different players. Tyrese Haliburton continues to find several of his teammates, assisting to six of his ten teammates in this contest. Although his overall assist numbers fell short of his season average, only having 7 when he averages nearly 12 per game. New player Pascal Siakam seemed to both receive a lot of attention, as well as dish out a few assists of his own, having a 1-1 ratio of assists to points from assists. The Pacers' bench players, T.J. McConnell, Buddy Heild, and Andrew Nemhard also made the most of their playing time, finding multiple teammates to assist to.

Although the Pacers have made several drastic roster changes this season, they continue to have the strongest connections between the players: Tyrese Haliburton and Myles Turner, Tyrese Haliburton and Buddy Hield, and Bruce Brown and Obi Toppin. Toppin seems to receive the most assists out of any player, possibly due to his slashing play style and notorious vertical and ability to dunk, leading many players, such as Haliburton to forego his own success with fast break points in favor of a flashy alley-oop to the team's star dunker: Toppin. In the games since the break, Haliburton's offensive role has diminished, most likely due to his minutes being restricted so that he won't get injured again. Despite this he still leads the team in assists, finding a strong connection with new teammate Pascal Siakam and maintaining connections with Myles Turner and Obi Toppin, although the assists to Toppin have come on more fast breaks rather than halfcourt offense.

References:

Pacers vs. Rockets Box Score: https://www.espn.com/nba/boxscore/_/gameId/401585347

Pacers vs. Hawks Box Score: https://www.espn.com/nba/game/_/gameId/401584127

NBA Assist Leaders: <https://www.nba.com/stats/leaders?StatCategory=AST>

NBA Team Offensive Rating:

<https://www.statmuse.com/nba/ask/nba-teams-offensive-rating-ranking>