Note: For these questions, I considered teams that moved cities/changed names the same franchise. For example, Seattle Supersonics and Oklahoma City Thunder are considered the same team/franchise.

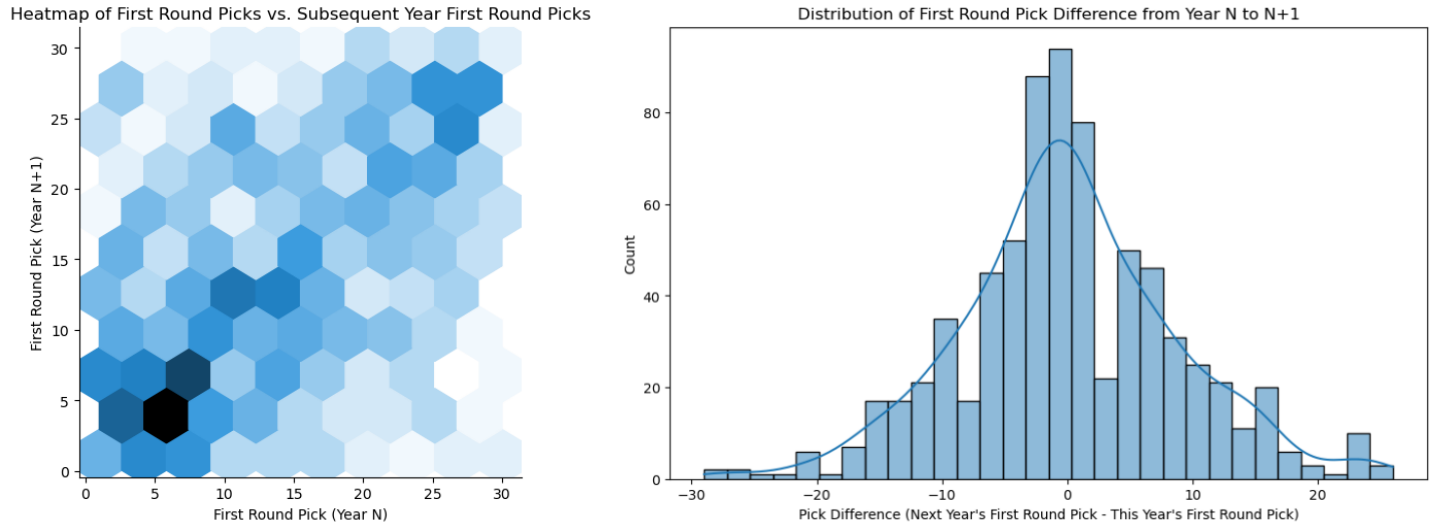
Which NBA team(s) has drafted the most players who went to Duke and were drafted in or before the 2000 draft?

The Dallas Mavericks, Phoenix Suns, and Minnesota Timberwolves are tied for the most with each having taken two players.

Which NBA team(s) has drafted the most players who have a first name that begins with D and were drafted in an even year draft (1990, 1992, 1994, …)?

The Oklahoma City Thunder/Seattle Supersonics have drafted the most players.

Describe the relationship between a team's first round pick slot in one year with their first-round pick slot in the subsequent year.



The heatmap on the top left shows the relationship between the first-round pick in year N and the first-round pick in the subsequent draft. We can see a clear linear relationship between first round pick this year and first round pick next year. This seems more pronounced for teams drafting in the top 10. It seems like struggling teams that are picking early tend to stay in that area from year-to-year.

We can see a similar relationship in the distribution plot on the top right. The distribution between next year's first round pick and this year's pick is centered around 0, meaning teams tend to stay where they are from year-to-year.

Create a method for valuing each draft slot in the NBA Draft (picks 1 through 60 in most drafts).

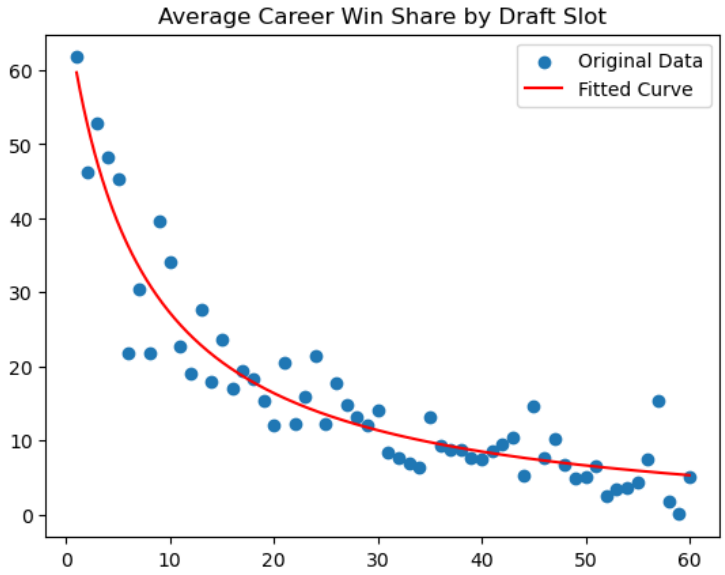
NBA Draft Value Table

Draft Slot	Pick Value	Draft Slot	Pick Value
1	59.7	31	11.0
2	52.9	32	10.7
3	47.5	33	10.4
4	43.0	34	10.0
5	39.3	35	9.8
6	36.2	36	9.5
7	33.4	37	9.2
8	31.1	38	9.0
9	29.0	39	8.7
10	27.2	40	8.5
11	25.6	41	8.3
12	24.1	42	8.0
13	22.8	43	7.8
14	21.6	44	7.6
15	20.6	45	7.5
16	19.6	46	7.3
17	18.7	47	7.1
18	17.8	48	6.9
19	17.1	49	6.8
20	16.4	50	6.6
21	15.7	51	6.5
22	15.1	52	6.3
23	14.5	53	6.2
24	14.0	54	6.0
25	13.5	55	5.9
26	13.0	56	5.8
27	12.6	57	5.6
28	12.1	58	5.5
29	11.7	59	5.4
30	11.4	60	5.3

The NBA Draft Value Table on the left provides a quantitative measure of the inherent value associated with each selection in the NBA draft, ranging from the first pick to the 60th. The values assigned to each draft slot are derived from a predictive model (chart below, red line) fitted to historical data on player performance, specifically using the metric of win shares.

Win shares is a comprehensive statistic designed to encapsulate a player's total contribution to their team's success in terms of wins. By analyzing the average win shares of players drafted at each slot over a significant period, we can generate an understanding of the expected 'value' that each draft pick brings to a team.

The model employs a reciprocal function, a mathematical function that was found to best fit the observed distribution of win shares. This function describes a pattern of diminishing returns: the higher the draft pick, the greater the expected contribution of the drafted player, but each additional step up in the draft order yields a smaller increase in expected win shares.



Conditional on the expected value of the draft positions, which NBA teams have over or underperformed the most when drafting during this time span?

Using analysis based on the model (left) and table above, the three teams that have overperformed when drafting are:

- Seattle Supersonics/OKC Thunder
- San Antonio Spurs
- Indiana Pacers

The three teams that have underperformed the most are:

- Los Angeles Clippers
- Dallas Mavericks
- Orlando Magic

Which College Teams have had the players outperform expectations the most after entering the NBA?

The three college teams that have had players outperform the most are (excluding teams that have had less than five players drafted) are: Wake Forest, Texas A&M, and Louisiana Tech.

Potential Additional Research: The first thing I would want to expand on is to incorporate injuries. A high draft pick could end up being a bust due to early injuries that could have been unforeseeable at the time of draft. I would also love to analyze trades involving draft picks to determine the best/worst teams when trading for/away draft picks.