

NBA Project 3 - for 3



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Intro - Story - Context

Relevance: According to Forbes' data, the NBA, with its 30 teams generated a total of US\$ 10 billion in revenue in the 2021-2022 season.

In 2022, the league's games reached 1.5 billion people in 215 countries and territories. This represents a 30% increase in viewership from 2017.

In the NBA (National Basketball Association), three-point shooting has become more prevalent in teams' offensive strategies. Pivotal to this movement is Daryl Morey, who founded the MIT Sloan Conference in 2006. Dubbed "Moreyball", Daryl emphasized the statistical benefit of shooting more 3-point shot attempts.



Methodology - Process

- Finding API (Data Sourcing)
- NBA API (<https://pypi.org/project/nba-api/>)
- Web Scraping
- Data collection and cleaning
- Dataset (shooting percentage and Winning percentage)
- Jupyter Notebook
- Data Visualization
- To investigate whether there is any correlation between winning percentage and three-point shooting percentage, we'll need to gather data on both winning percentages and three-point shooting percentages of basketball teams. Then, we used Microsoft Visual Studio Code (VS Code) along with Python for analysis.

NBA Teams



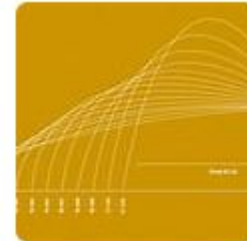
7 NBA Teams



Three Point shots

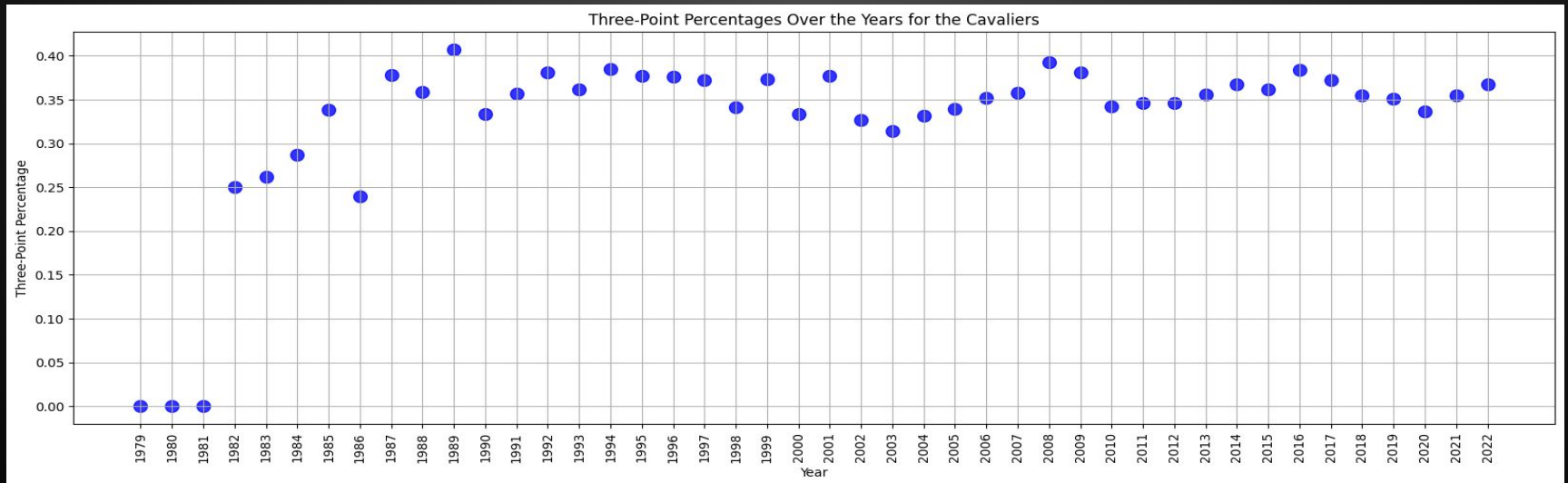
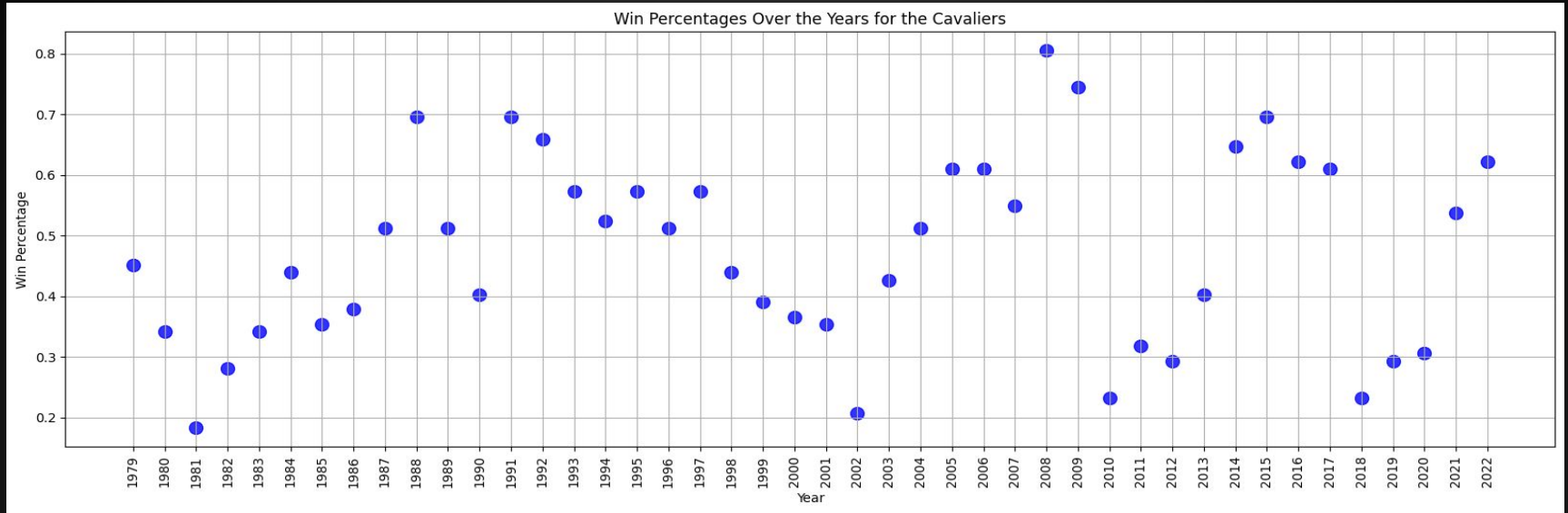
NBA introduced the 3-pointer in the 1979-80 season by adding a 3-point line.

20% - 35%

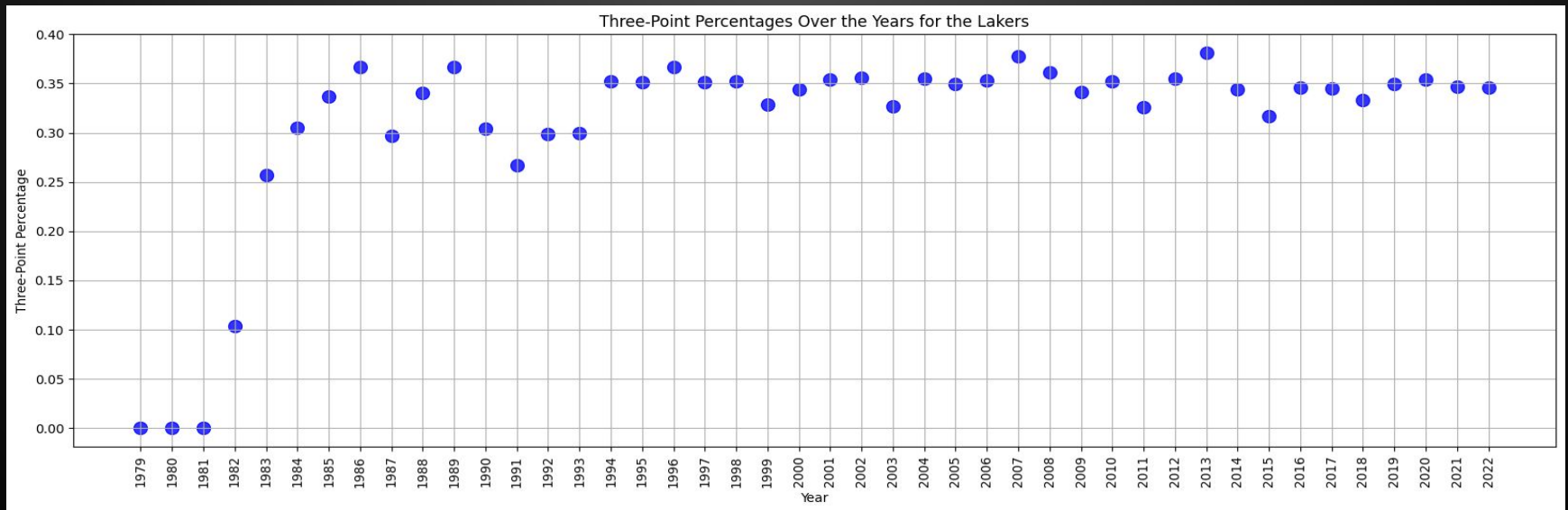
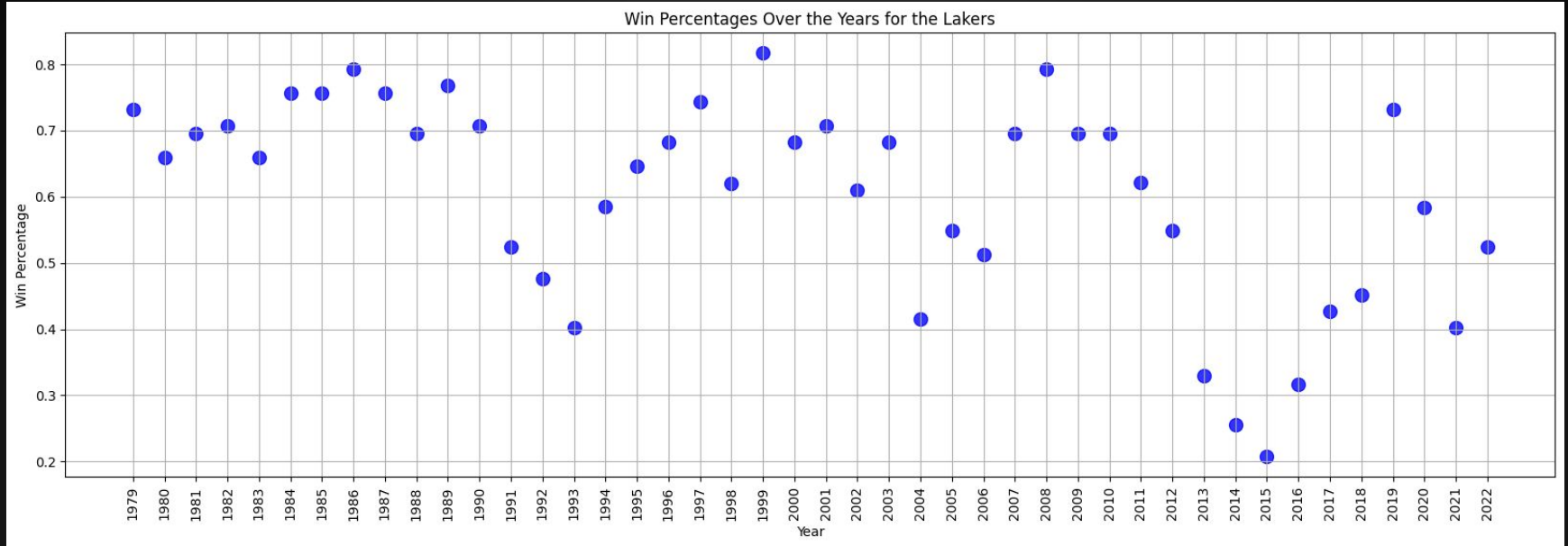


One thing all teams have unanimously come to the conclusion of has been that attempting three-point shots, especially from the corner, statistically give you a **20% - 35%** higher chance of winning games based on win probability added calculations.

(Cavaliers) team_stats.ipynb

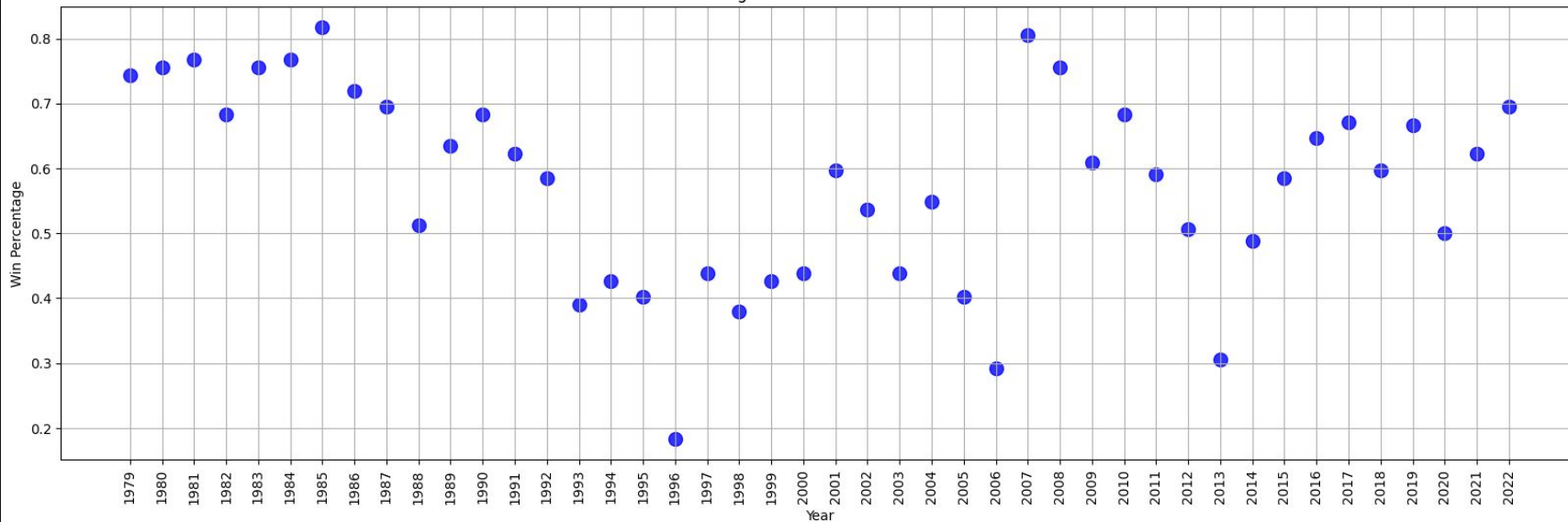


(Lakers) team_stats.ipynb

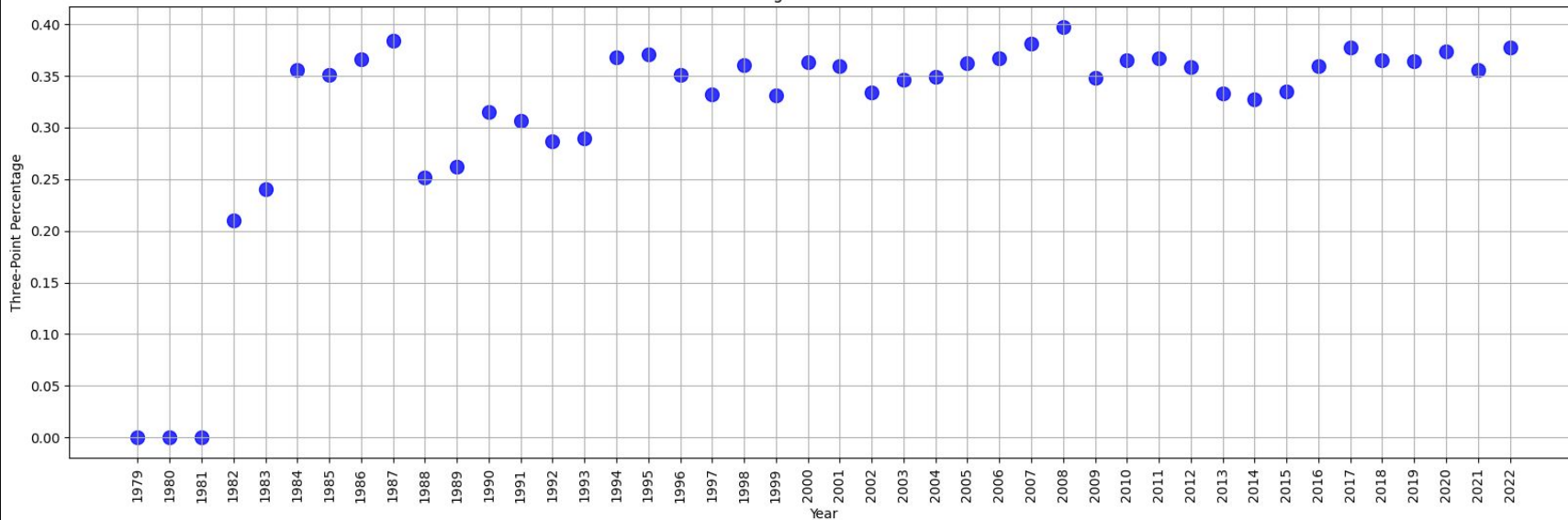


(Celtics) team_stats.ipynb

Win Percentages Over the Years for the Celtics

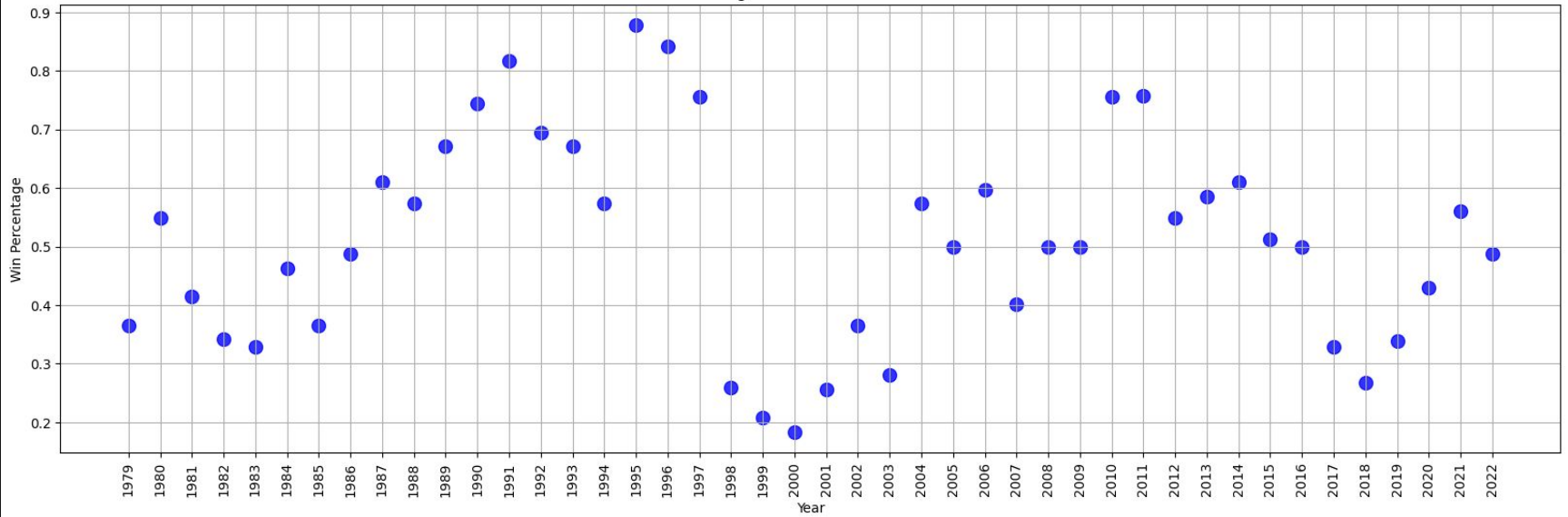


Three-Point Percentages Over the Years for the Celtics

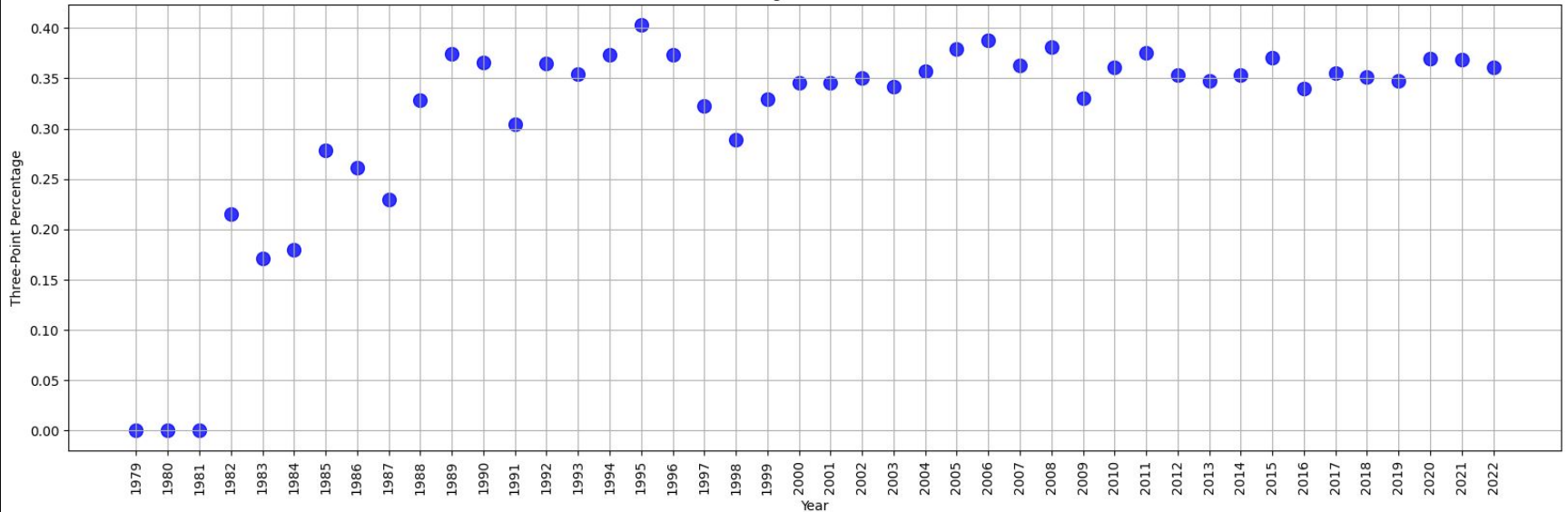


(Bulls) team_stats.ipynb

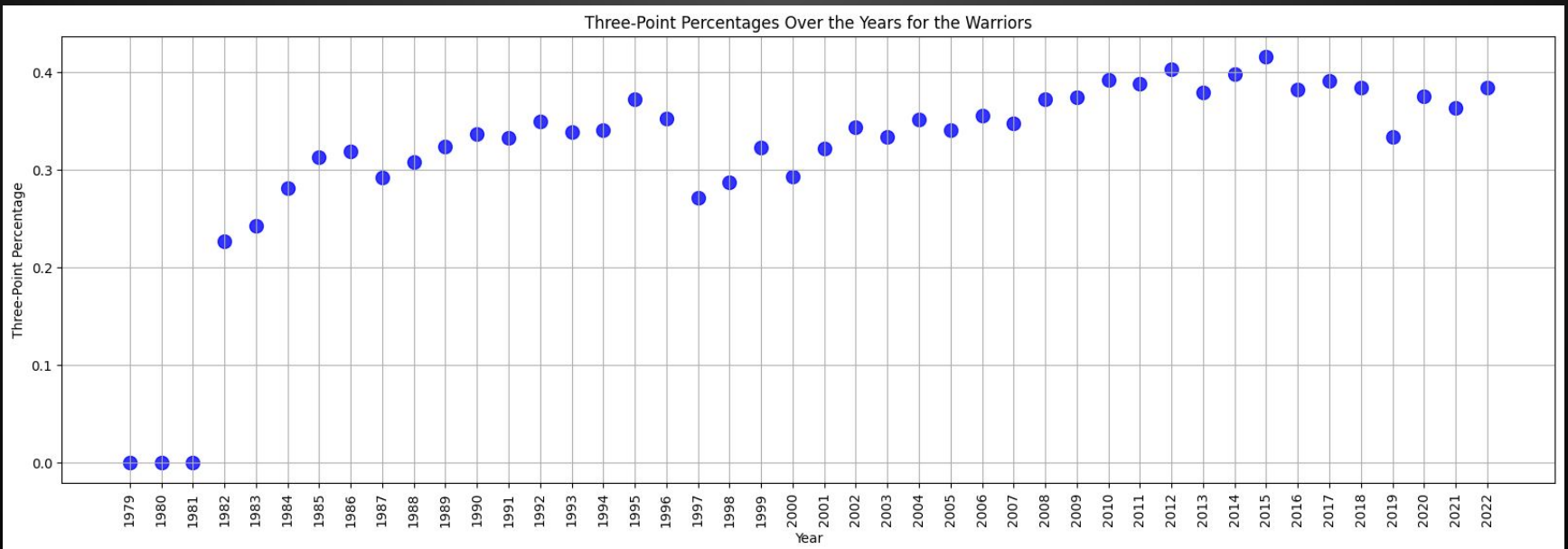
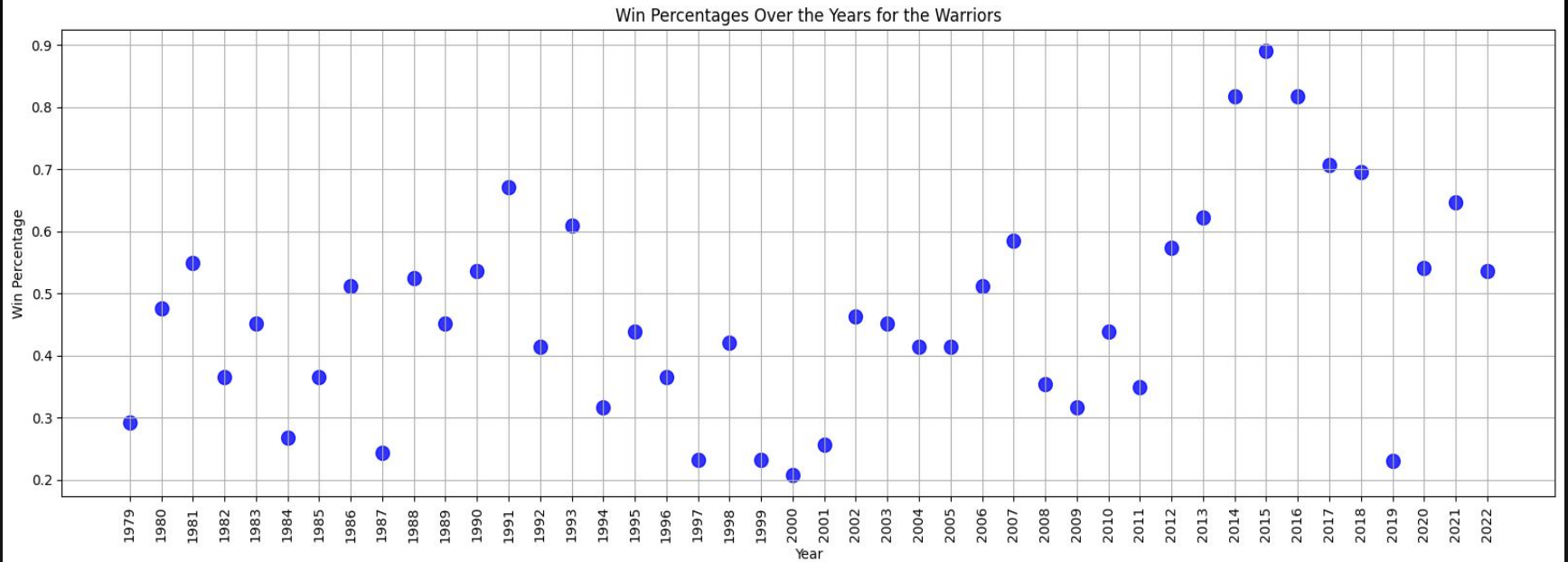
Win Percentages Over the Years for the Bulls



Three-Point Percentages Over the Years for the Bulls

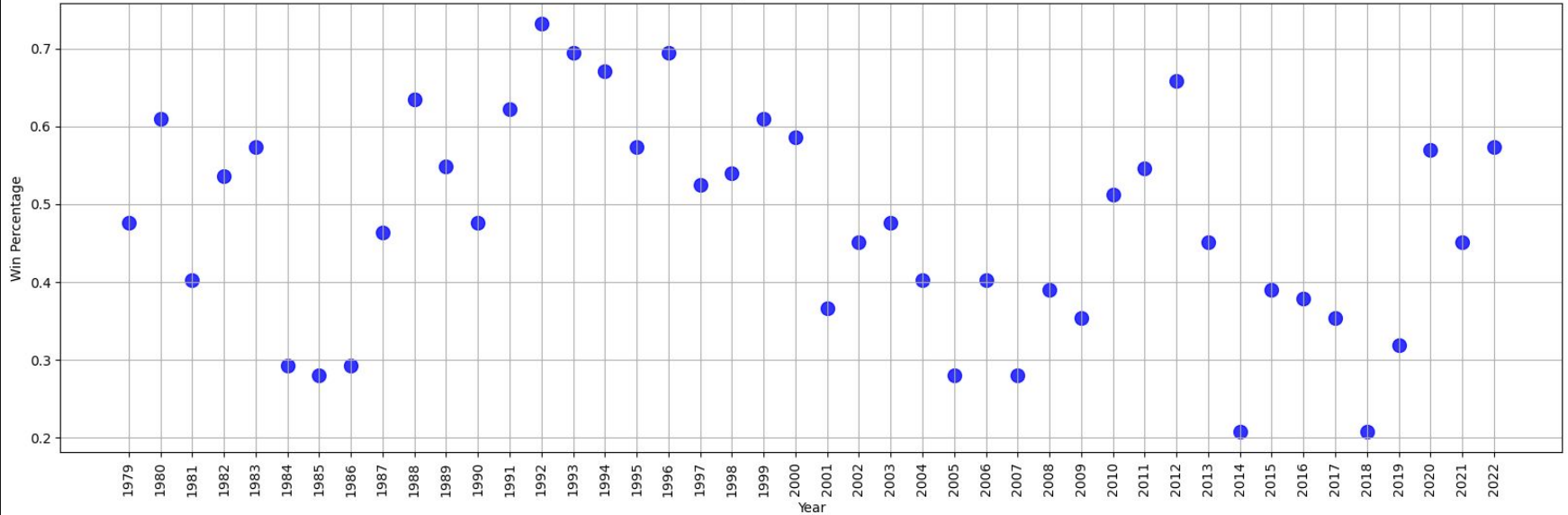


(Warriors) team_stats.ipynb

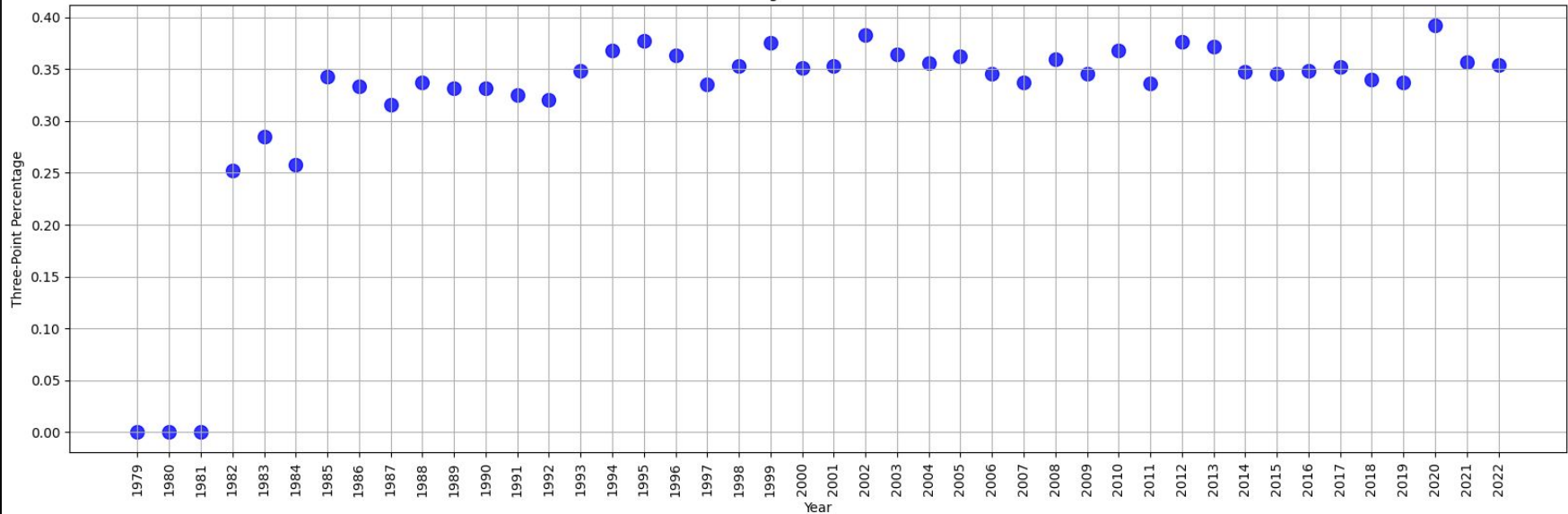


(Knicks) team_stats.ipynb

Win Percentages Over the Years for the Knicks

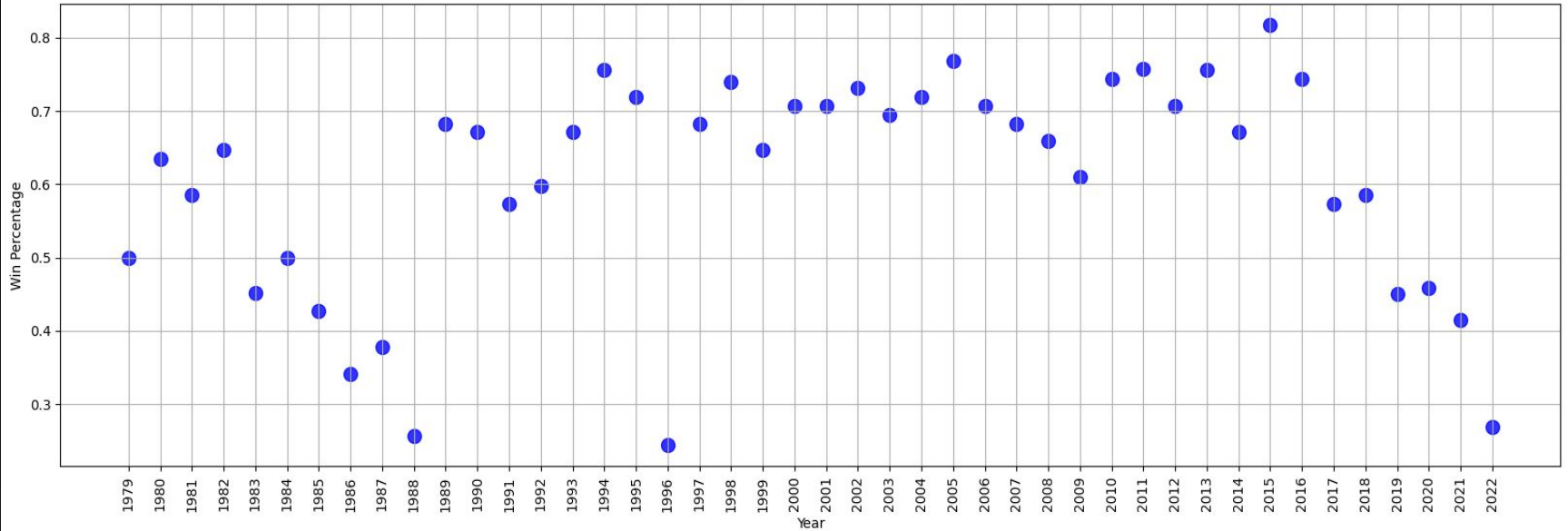


Three-Point Percentages Over the Years for the Knicks

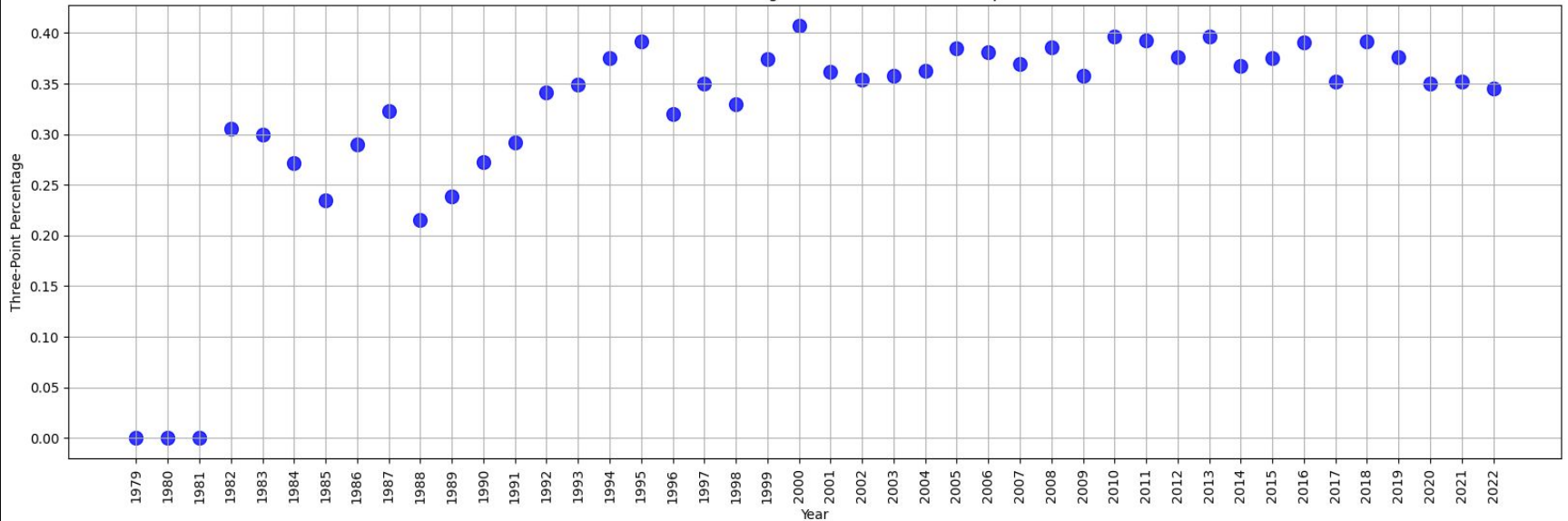


(Spurs) team_stats.ipynb

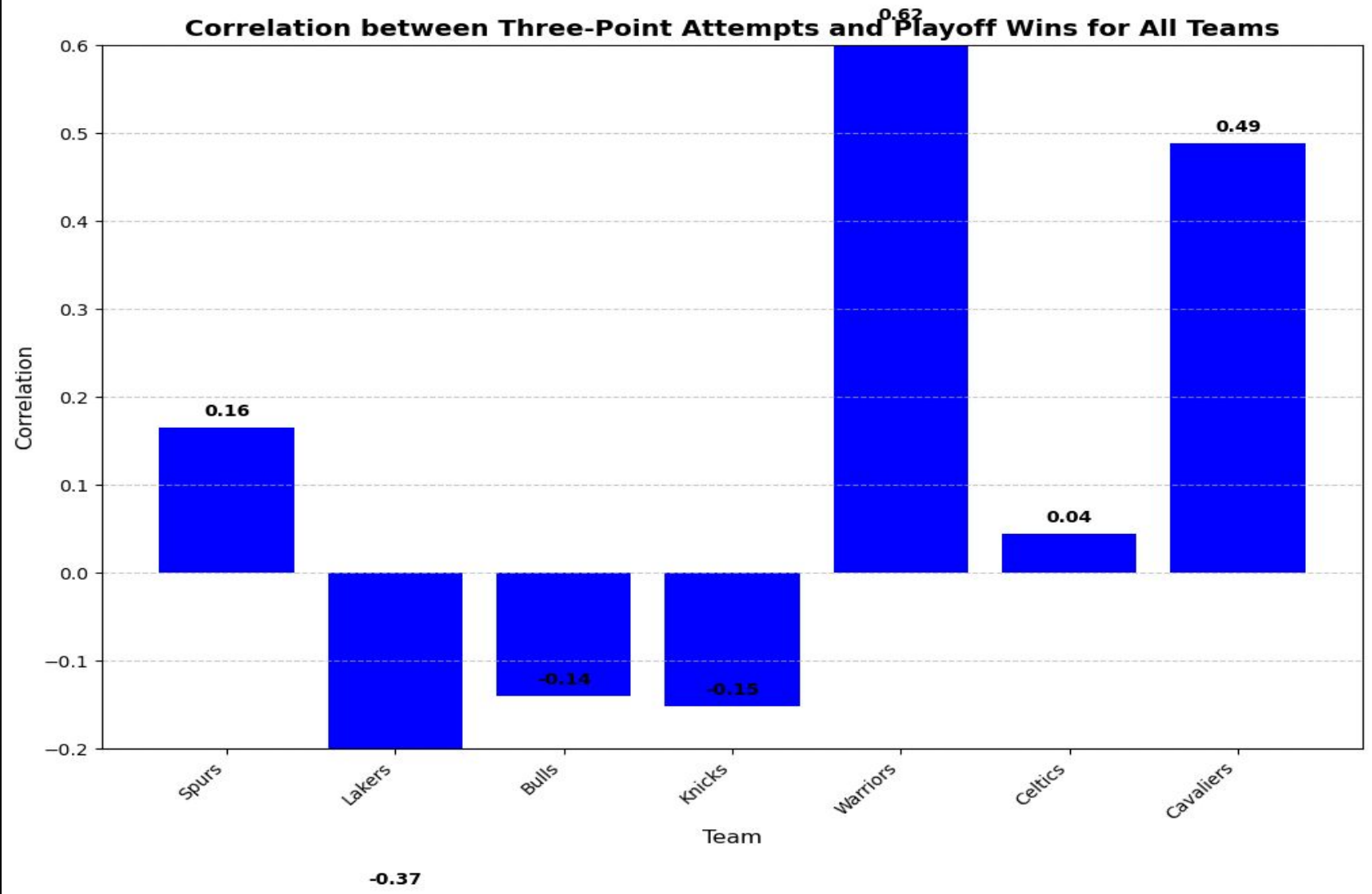
Win Percentages Over the Years for the Spurs



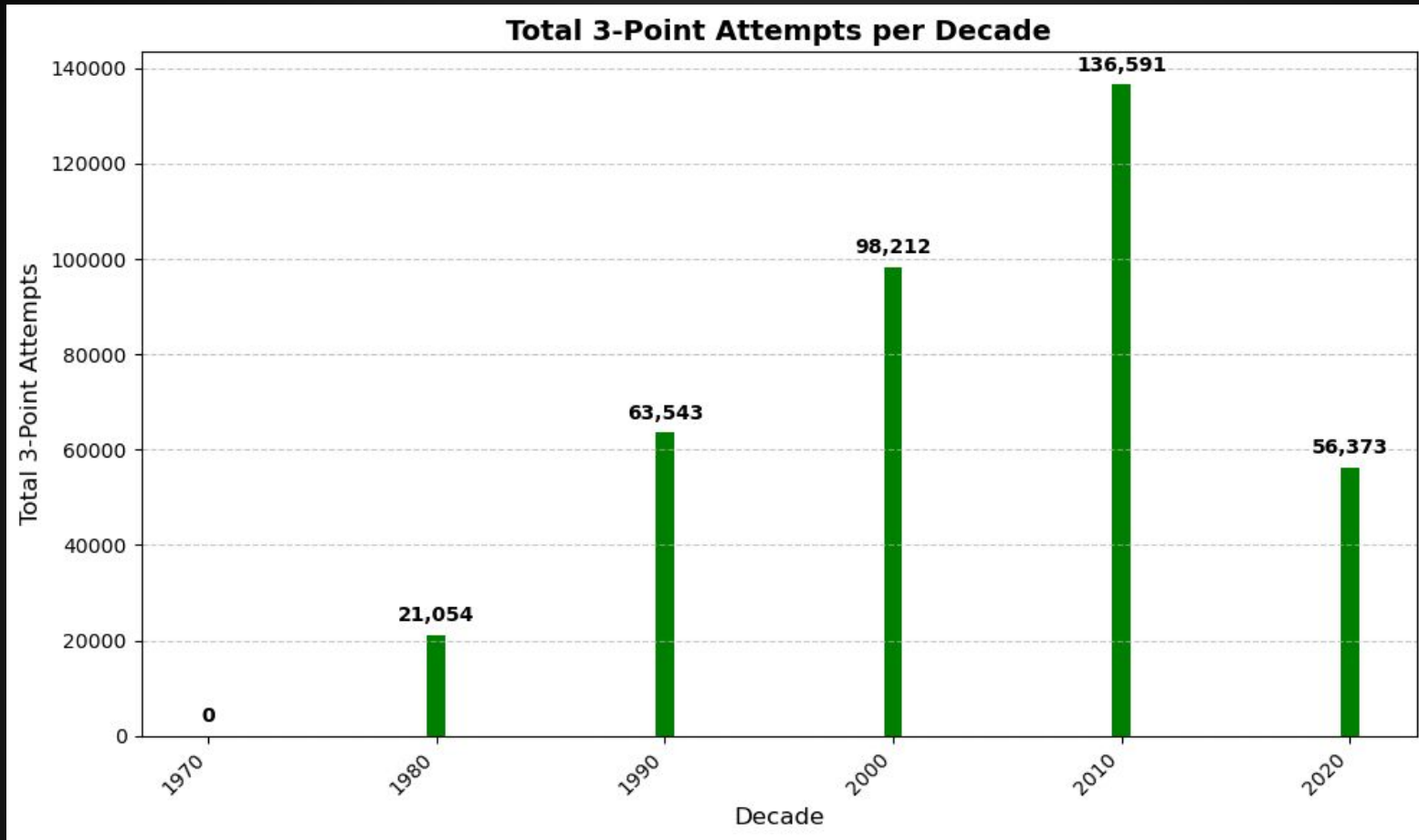
Three-Point Percentages Over the Years for the Spurs



3pt PANDA.ipynb



3-Point Attempts per Decade

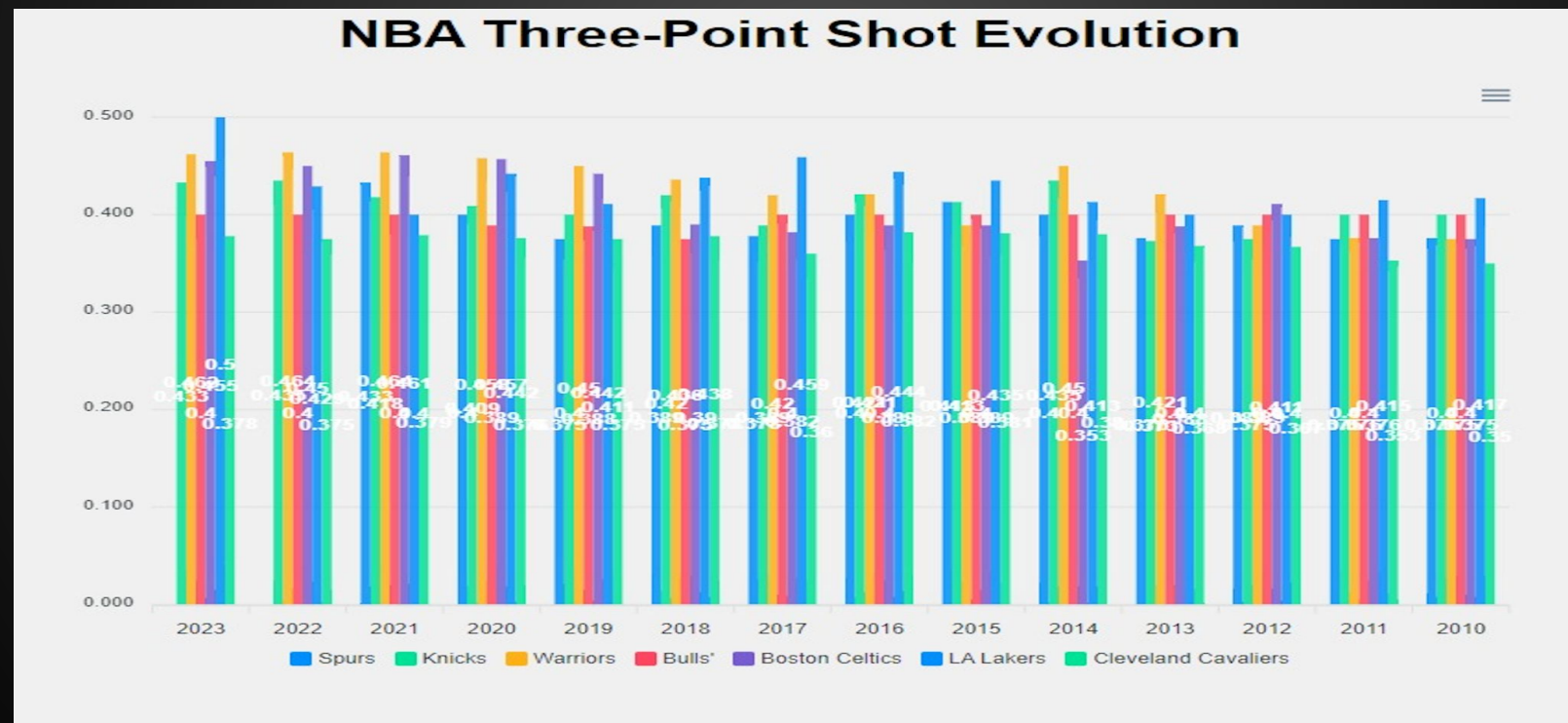


3-Point Attempt increases shown as percentages for each decade

- 1990-1999 201.81%
- 2000-2009 54.56%
- 2010-2019 39.08%
- *2020-2029 is projected to increase by 37.58% from 2010-2019 based on data from 2020-2022*

Evolution of 3-Point Shooting in the NBA

When the NBA introduced the 3-pointer in the 1979-80 season, it had minimal impact on the game at first. In the first five seasons, teams took less than three 3-pointers a game and made only a dismal 26% of them. It took a while until the 3-point shot was more widely accepted and utilized.



In Conclusion

It is clear that the NBA has changed drastically with the evolution of the 3-point shot.

Our data clearly shows that the 3-point attempts have significantly increased every decade.

The Warriors do show a high correlation 3-point attempts and winning the championships.

Within our dataset we had a few outliers, one of them is the LA Lakers who attempted fewer 3-point shots and they won games by having notable players like Magic Johnson, Kobe Bryant

The NBA's popularity is growing. In 2022, the league's games reached 1.5 billion people in 215 countries and territories. This represents a 30% increase in viewership from 2017.



Questions?

