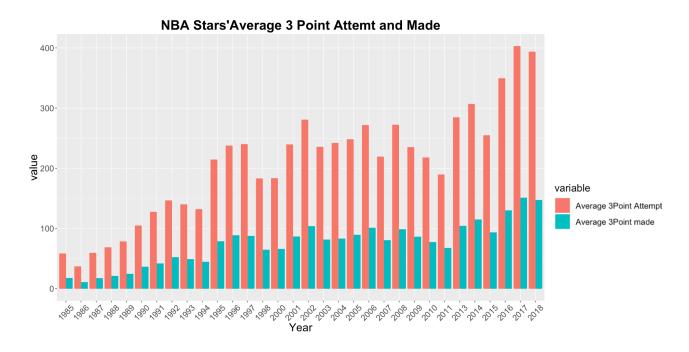
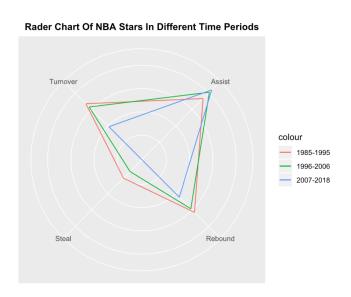
## **Executive summary**

In this project, we try to figure out the evolution of NBA players. We collected all NBA players' statistics each year from 1985 to 2018. Below is what we find.

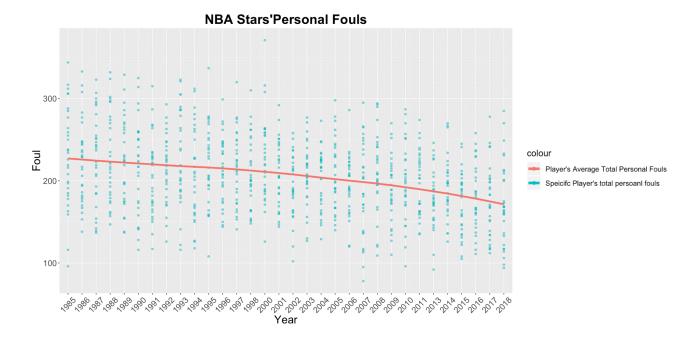


We calculated the avenge number of 3 point attempt and made by NBA stars, and drew the bar chart for each year. It is very clear that both average 3 point attempts and average 3 point made increase, and we could conclude that 3 point becomes much more important for modern NBA stars.



In order to better understand the evolution of NBA stars, we group NBA stars according to the year they played. There are 3 different groups: players who playing between 1985 to 1995, between 1996 to 2006 and between 2007 to 2018. We use radar charts to demonstrate differences of players in different time periods.

In this radar chart, we focus on steal, turnover, rebound and assist. Most recent NBA stars do not have many steals and turnovers, and the reason might be that NBA is not as aggressive as before or that NBA stars now focus more on offense not defense.



This graph shows how number of total personal fouls changes by year, the a blue point represents a NBA star, and the red line shows the trend of average number of personal fouls. It is very clear that the number of NBA stars' personal fouls decreases. The reason behind that might be that NBA games are simply not as aggressive as before, or that more shootings behind the 3 point line makes less likely for NBA stars to get fouled.

## Conclusion:

NBA stars tends to shoot more behind 3 point line now than before, and 3 point has become a very important tool for NBA stars. In the past, NBA stars did not shoot many 3 point. We also notice that NBA stars get fewer free throws and personal fouls, that might be due to that more shootings behind the 3 point line makes less likely for NBA stars to get fouled. We also find that NBA stars focus more on offense now, rather than defense, because they have fewer turnovers and rebounds.

With all we find above, we conclude that NBA is not as aggressive as before and NBA players are better protected now.

More info and code: https://github.com/Peter-Pan-001/EDAV\_Final\_Project

Authors: Zichen Pan, Kunpeng Liu