From the 2000 to the 2016 NBA season there have been 998 selections for all star players. Out of those 998 selections, there are only 124 unique players. Out of those 124 players, 40 have made exactly 1 appearance, and the other 958 selections were made up of the other 84 players. Among the other 84 players, 53 of them made less than 5 appearances, and only 31 made 5 or more appearances in all star games between 2000 and 2016 in the NBA. We were curious as to whether or not players that were selected for the all star game more have statistically higher shooting percentages than other players.

We decided to use the shooting data we were given and analyze shooting percentage from the left, middle, and right of the court for two and three pointers based on score pressure. We defined score pressure as a 2 shot difference, this leads us to split that into groups of 5 or more points behind, within 5 points, and 5 or more points ahead. This creates 18 sets of data, 6 shooting areas for 3 groups of players. After breaking out our 18 datasets we used Python to further analyze the data by splitting the shots up by score pressure. We expected that the player group who were selected 5 or more times for the all star selection to have statistically significant, with a p-value of 0.05, higher shooting percentages.

We found that while 2 point shooting was almost flat across the board with each group making roughly 38% from behind, 44% while within 2 shots, and 51% while ahead. However we did find that 3 point shooting was significantly lower in the group that only made one all star appearance. The group that only made one all star appearance had an average shooting percentage of 22% while behind, 31% while within 2 shots, and 40% while ahead. We can say, with 95% confidence that the players of the other two groups shooting percentage for three pointers are higher than the players in the group with only one appearance. The averages for the other two groups were 26% (for both) for behind, 35% and 36% while within 2 shots, and 45% and 46% while ahead, for two to four and five or more appearances, respectively.

We also looked at standard deviations for each group and found that the standard deviation in shooting percentage differed between group and location more than based on score pressure. The one appearance group had standard deviations of 1% for two pointers, and 2% for three pointers, the two to four group had standard deviations of 0.8% and 1% for two and three pointers, and the five or more appearance group had even lower standard deviations of 0.4% and 0.8% for two and three pointers respectively.

We believe our data shows that a significant difference between players who appear in all stars once and players who appear in all star games multiple times is higher three point shooting percentages with better consistency.