

The story, design rationale and justification

"The tennis return of serve is one of the best weapons many tennis players have." [1] Returning a serve gives the player a good opportunity to score points by scoring an ace or breaking a server or in any other way possible. This made me draw an assumption that if a player is good at return serves, then he/she must have a high chance of scoring in the first and second serve, which eventually should pave the path to championship in a game. If the number of return serves are plotted against the total percentage of scoring the first and second serves, it should show a relationship where the champion holds high return serves and a high percentage of scoring the first and second serves whereas the runner-up holds the opposite.

Data Visualization

I have used bar charts to illustrate this relationship so as to clearly depict the highs and lows in the aforementioned relationship between the champion and runner-up. The relationship is analysed for each of the ten years so as to understand if it is a valid trend. Scatter plot has also been included to show clear differentiation between the points for the champion and runner-up by utilizing different shapes for each. The shapes have the same size as they are primarily used for differentiation. Points for the champion and runner-up have been coded in different colors to show the distinction from each other and from the bar charts to offer better visualization.

Reflection on design and outcome

After plotting as per the design, the assumption did seem to be true for nine out of ten years. Players who had a higher percentage of return serves had a higher percentage of scoring in the first and second serves and also turned out to be the champion of the match. The bar chart of the champion is found to be on the right of the runner-up indicating having high return serves and the height of the bar chart for the champion is higher than that of the runner-up indicating having a higher percentage of scoring in the first and second serves. One anomaly in the trend was in the year 2009, where the runner-up has a higher return serve and higher percentage of having scored in the first two serves than the champion. One reason for this might be that the player played aggressively or the player might have performed well during the initial stages of the match and lost confidence or might have become anxious towards the end, which may have led to him/her losing numerous points due to errors. All in all, since the assumption turned out to be right for 90% of the data, we can conclude to some extent that this is valid trend. However, the data has only been analysed for 10 years and hence the trend must be verified on a larger dataset to be concluded as being valid.

Reference:

[1]: <http://www.optimumtennis.net/return-of-serve.htm>