In the following case study, we have observed the data for last 10 years' Australian Open matches and tried to derive a few insights. I have provided a web page where any year can be selected through radio buttons and the corresponding years’ quarter, final and semi-final matches will be evaluated. Then a chord diagram will be displayed which will consider the no. of aces scored by both players for all the matches. No. of aces is one of the top stats considered when evaluating any player. Also, I have made sure to include the no. of aces of the winner and the loser both, because this is not a game deciding criteria and the loser may have performed better in this specific area.

I would also like to list some of the interesting insights that can be derived from this setup. One of them is that we can monitor the graphs of each year to compare how a player has been performing recently. Since the graph contains almost all of the top players, it will be easy to compare his performance. Also, by seeing the graphs of the several years, one can observe if there is an upcoming player or a player which has started performing well suddenly and is showing hopes in upcoming tournaments.

Another thing noticeable in these graphs is the relative performance of each player. Since the arc angle is decided on the basis of no of aces scored by a player out of the total no of aces by all players, just by seeing the area occupied by a player, we can see the skills demonstrated by him. In fact, we can take this further and observe all the chords originating from a single player and see his performance against his competitors. If he has a good arc angle (more total no of aces), but most of it is coming from one big chord, that means he has scored most of his points against one particular player, but didn’t perform well amongst others. This might be due to the fact that he is playing with better opponents, or it may indicate that he is specifically strong against a particular player (or a set of players with same playing style).

Choice of chart used was made by keeping in mind the most self-sufficient way to depict the comparison. Since two way metrics was required (winner to loser and vice versa), chord diagram showed very promising results. Also I’ve made sure to use bright colors contrasting each other which is easily distinguishable as chord diagrams can sometimes be very conjusted to look at. As a part of animation, when any of the player is hovered upon, only the chords leading to or originating from it are displayed and the rest are faded to improve visuals. The whole page is written mostly in javascript where D3.js has been used extensively along with basic html/css for front end display.