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DSC 530-01 – Data Visualization

DV - Project Report

Cricket Analysis using D3js

Under the Guidance of
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Overview of Cricket Analysis

International Cricket is a very competitive tournament where team selection is a very tricky and tedious procedure. Analysis of sports data and Prediction of each player's performance helps in filtering the best players. A novel method employing the techniques of Data Analytics and Data Visualization is used in this project to extract individual player performance from huge statistics and datasets. The visualizations are created to bridge the space between selecting team, and team management and to give a better interpretation on player consistency, scoring and further capabilities. In this project, we used d3.js for visualization and HTML, CSS for the front-end application. The proposed application can be beneficial for team managements and decision making.

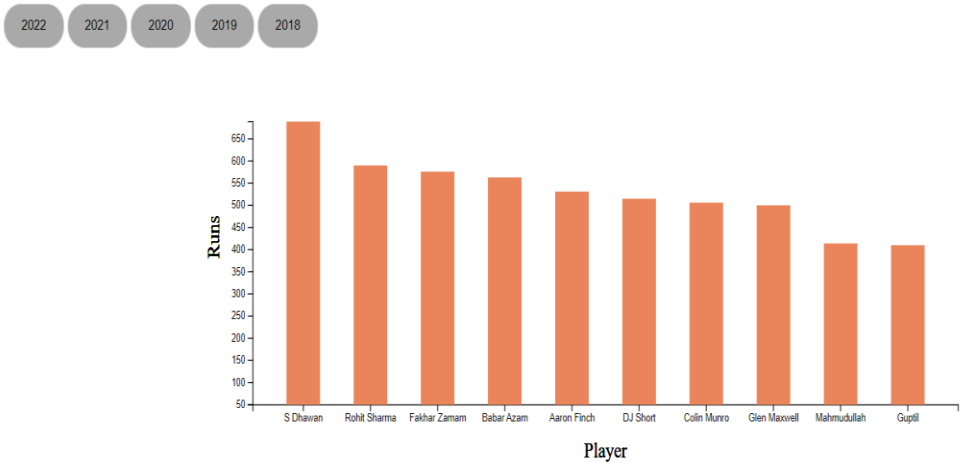
Why and How

- To aid in the formation of the best team for various formats of international cricket based on the performance of the individual player.
- This project was started to provide better readable statistics about the data so that selectors and users may readily compare the data.
- Using the D3.js package to visualize a player's performance using Bar, Geospatial, and Line charts.

1. Multiview – added the visualization in same page
2. Documentation – added labels and x-axis
3. Comparissions – By looking into the graphs it shows that virat kohli scored most runs in the last 5 years.
4. Filtering – we have done filtering the data from different sources
5. Multiselect – used drop-down and buttons to select the necessary data.

Design

Visualization-1



The Bar chart shows the top 10 run scorers in T20 international matches during the previous five years, from 2018 to 2022. The runs make up the y-axis, while the players' names and nations make up the x-axis. By clicking the year you get the top 10 run scorer, and the color of bar chart varies for every year.

Visualization-2 : Batsmen

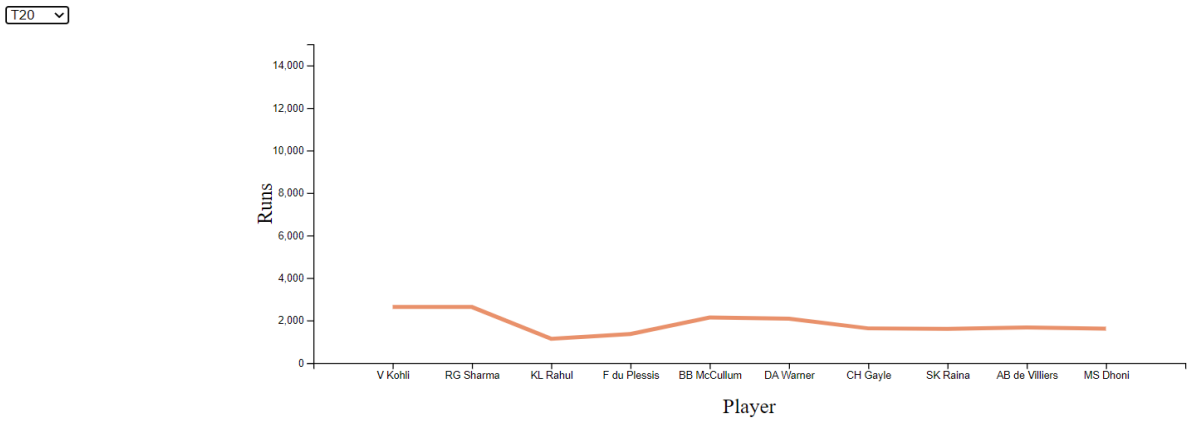


Fig no: 2.1

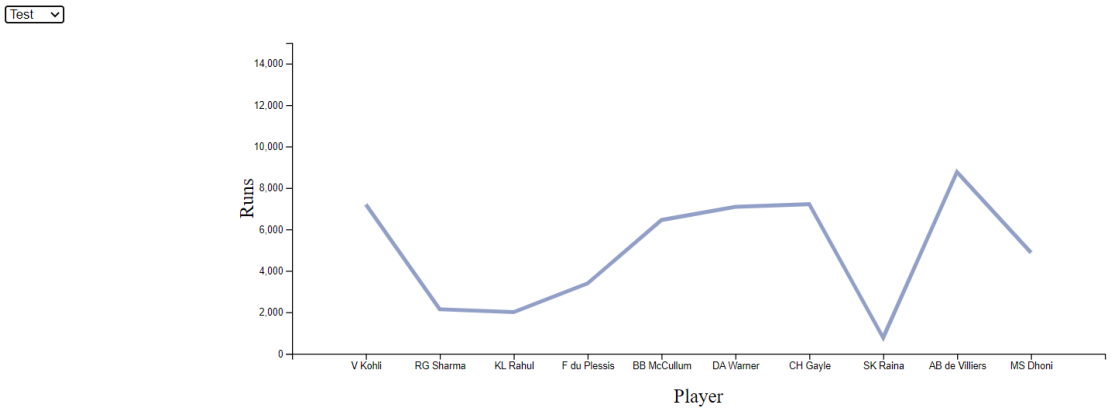


Fig no: 2.2

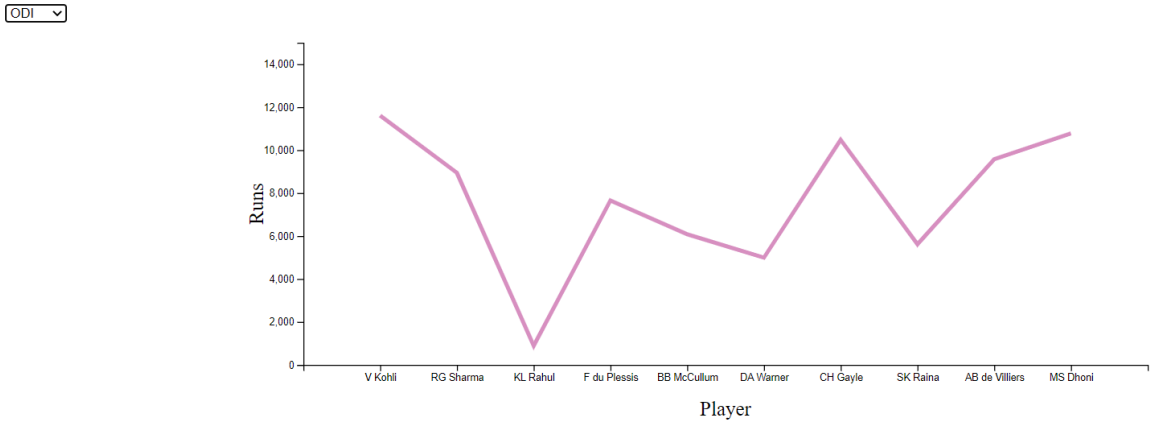


Fig no: 2.3

- The figure 2.1 shows the data of the top run scorer in international T20 cricket, where x-axis shows the player's name and y-axis show the runs scored.
- The figure 2.2 shows the data of the top run scorer in international Test cricket, where x-axis shows the player's name and y-axis show the runs scored.
- The figure 2.3 shows the data of the top run scorer in international ODI cricket, where x-axis shows the player's name and y-axis show the runs scored.

Visualization – 2 : Bowling

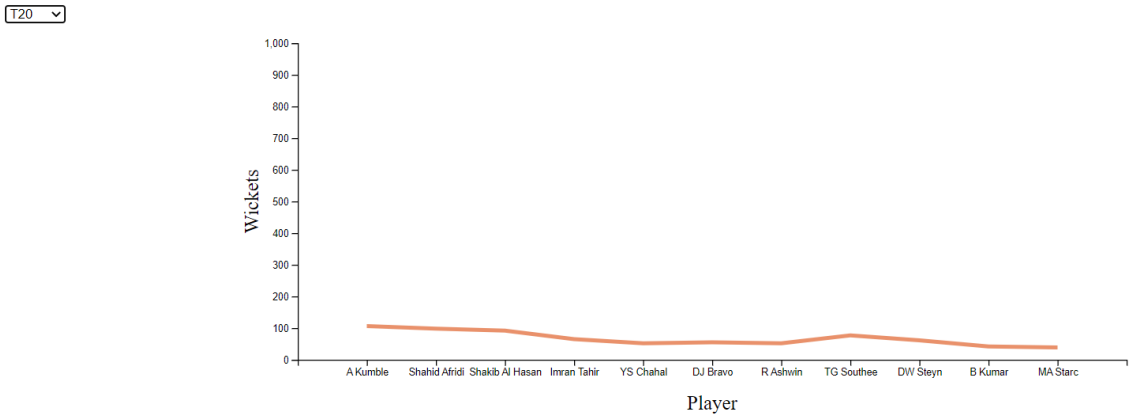


Fig no: 2.4

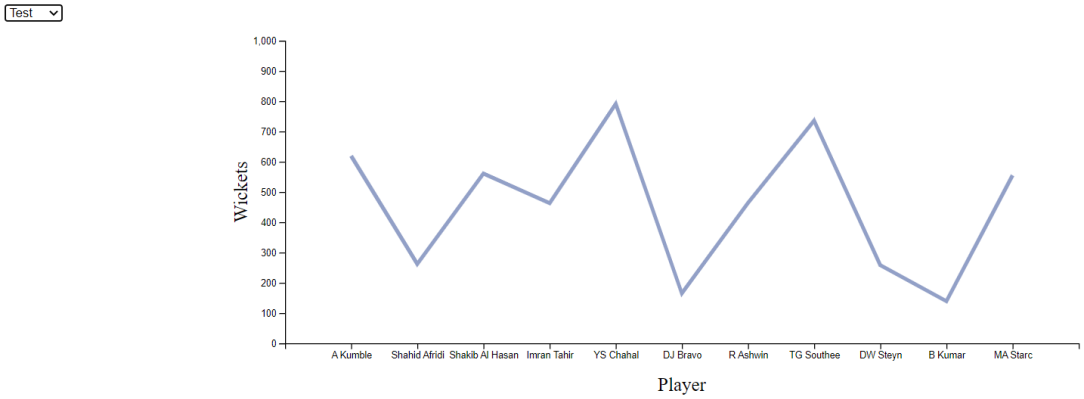


Fig no: 2.5

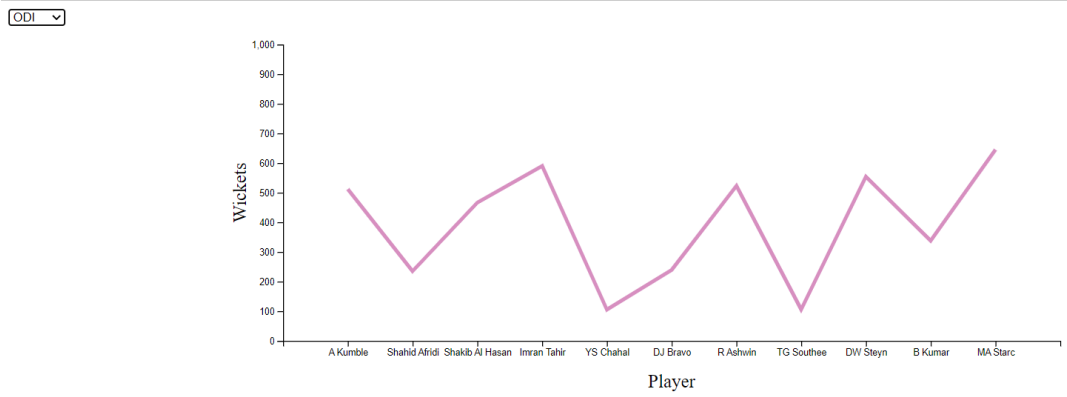


Fig no: 2.6

- The figure 2.4 shows the data of the top wicket takers in international T20 cricket, x-axis shows the player's name and y-axis show the wickets taken.
- The figure 2.5 shows the data of the top wicket takers in international Test cricket, x-axis shows the player's name and y-axis show the wickets taken.
- The figure 2.6 shows the data of the top wicket takers in international ODI cricket, x-axis shows the player name and y-axis show the wickets taken.

Visualization -3 : Geospatial

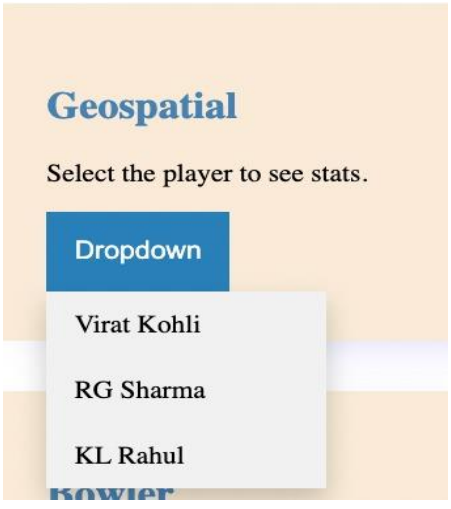
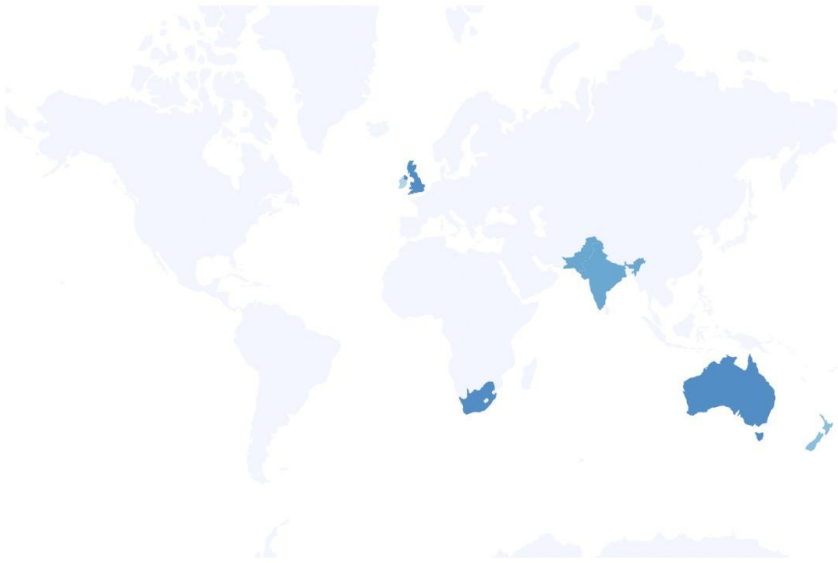


Fig no: 3.1

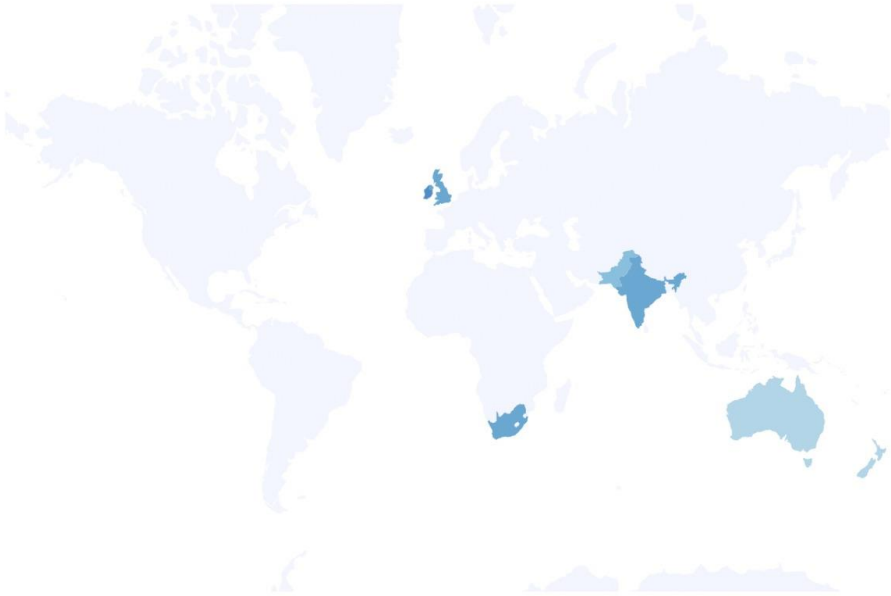
Virat Kohli



Higher the intensity of the colour, the higher the runs.

Fig no: 3.2

RG Sharma



Higher the intensity of the colour, the higher the runs.

Fig no: 3.3

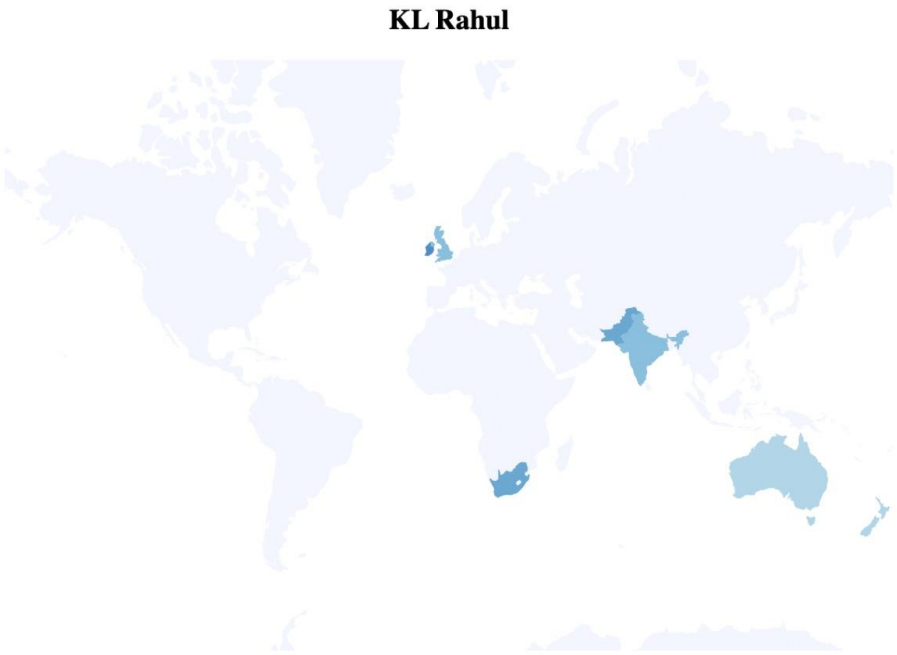


Fig no: 3.4

- We have created a dropdown box, by choosing the player you can see the stats of the player where the player has scored a greater number of runs in geospatial. The higher the intensity of the color the higher the player scored in the particular country.
- In figure 3.2, 3.3, and 3.4 you can clearly see the intensity of the color varies, the higher intensity means the higher the player scored.

Final HTML Page:

Discussion:

- We have achieved our primary goal to create visualization of bar, line and geospatial from the dataset we gathered.
- In the Phase 1 we have described about why we wanted to take up this project and we have collected necessary data sets to create visualizations from them.
- In the 2 phase we have made a presentation on how the final visualization of bar chart and geospatial look.
- We have achieved our predicted visualization by using D3js, javascript, HTML, and css.

Challenges:

- Since there are many of data on the web, we had to evaluate every piece of data and cross-check whether the data was legit.
- The data we got is raw, and we have to use the static the data.

Limitations:

- We Weren't able to add all the players in the geospatial due to big dataset.

Future:

- We Will learn to use large datasets for visualization.

URL's:

https://tilak559.github.io/cricketanalysis/