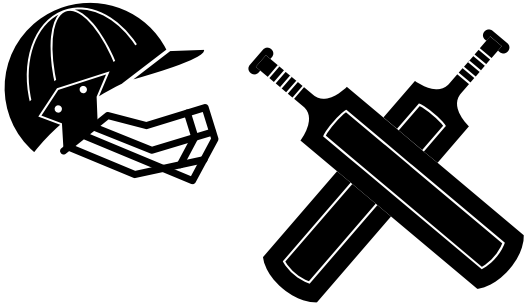
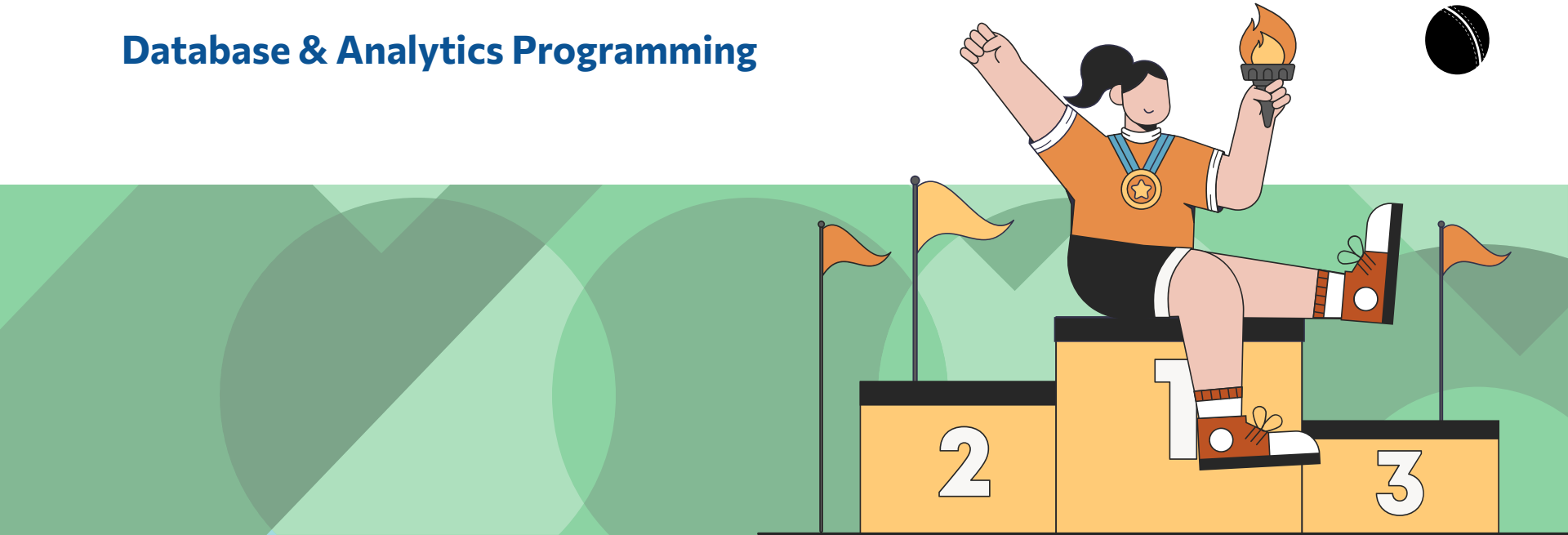
Breaking Boundaries: Uncovering Patterns and Trends in Cricket through Advanced Data Analytics



Database & Analytics Programming



TEAM

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Anish Romario

x20190841

Sonal Puradkar

x22130250

Nandheeswari Rajendran

x22132210

Newness about our model

Dataset 1

ESPN CRICKET Info

Won lost, Best batsman, bowler, match statistics between teams

Dataset 2

Region based stats

Dataset 3

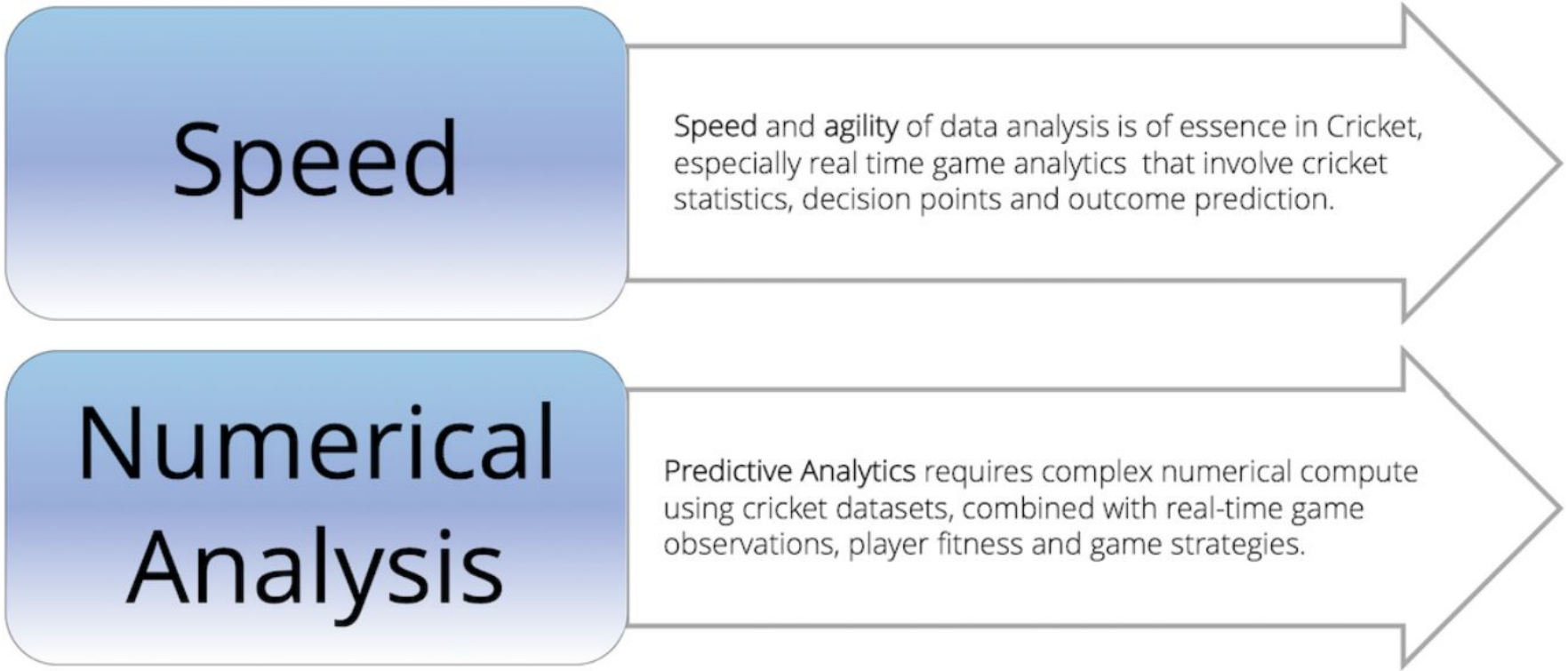
Focus on Particular teams(India Vs Australia)

Dataset 4

IPL Matches

RCB

“Alone, we can do so little; together, we can do so much.”



Key NumPy Capabilities utilized

Introduction

Why Cricket Data Analytics

- Performance moving average
- score forecasting
- gaining insights into fitness and performance of a player against different opposition,
- player contribution to wins and losses for making strategic decisions on team composition

IMP Steps

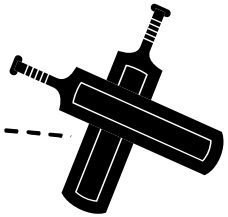
- New Libraries
- Statistical Analysis
- Data Visualization

CLOUD BASED

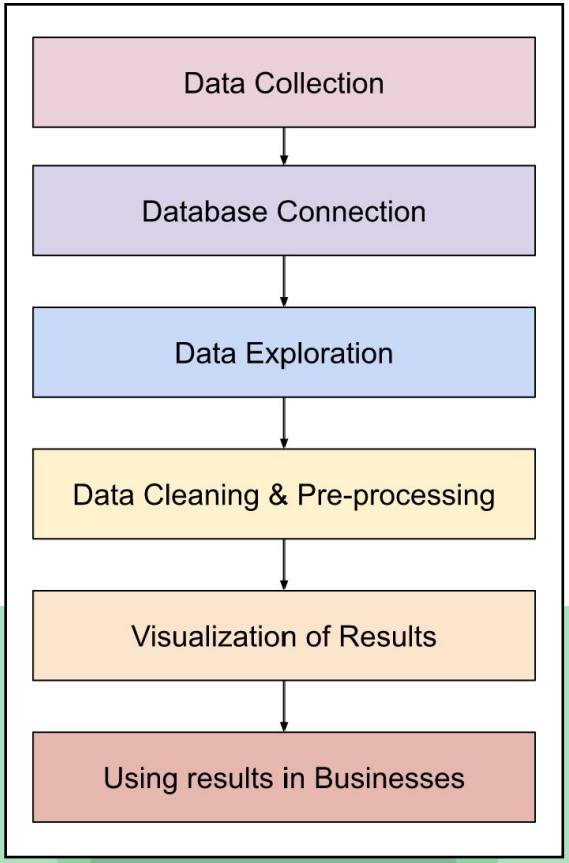
01
Google Colaboratory

02
Nosql Database Connections

03
SQL Database Connections



Flow of Model



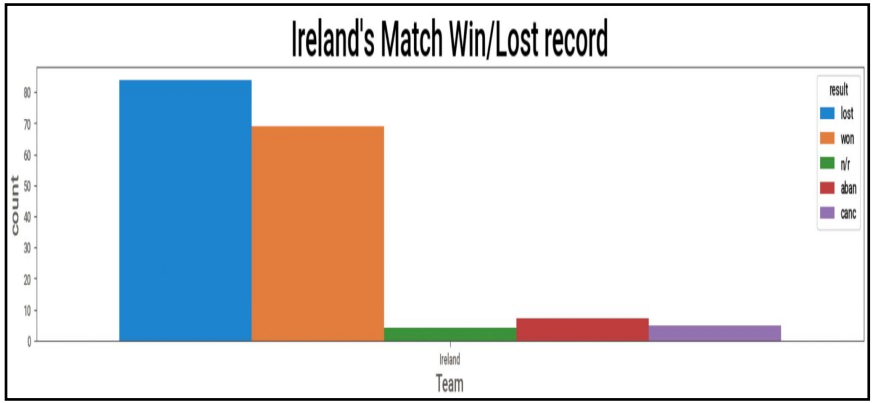
01

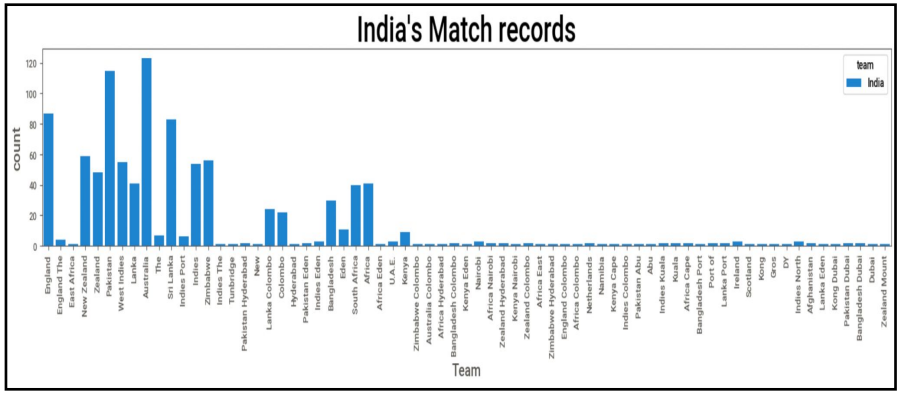
ODI real time dataset

ESPN CRICKET DATA - Live **cricket** scores, **cricket** updates of upcoming International, domestic and T20 matches. Catch all the latest videos, news about **cricket**

Analytics

- Won/lost the batting first
- Who won/lost the toss,
- The opposite teams every match
- The grounds where all the matches were played
- Result of the match





```
ground_number("Ireland")
```

```
opposition   ground
Abu          Dhabi        5
Afghanistan  Belfast       9
             Dehradun      4
             Dhabi         1
             Dubai         1
                          ..
West Indies  Nelson        1
Zimbabwe     Belfast       2
             Bready        1
             Harare        7
             Hobart        1
Name: ground, Length: 90, dtype: int64
```

```
[ ] ground_number("India")
```

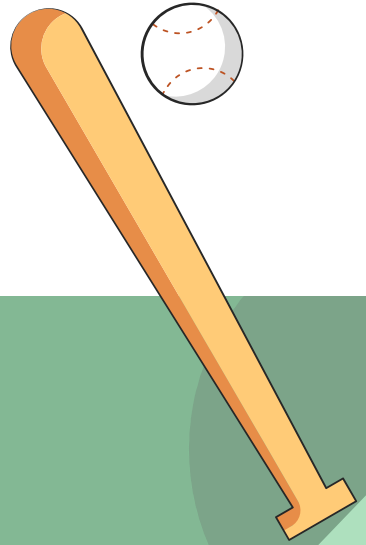
```
opposition   ground
Abu          Dhabi           1
Afghanistan  Dhaka            1
             Southampton      1
Australia    Adelaide         6
             Ahmedabad        3
                            ..
Zimbabwe     Pune             1
             Rajkot           1
             Sharjah          5
             Singapore        1
             Vadodara         1
Name: ground, Length: 385, dtype: int64
```

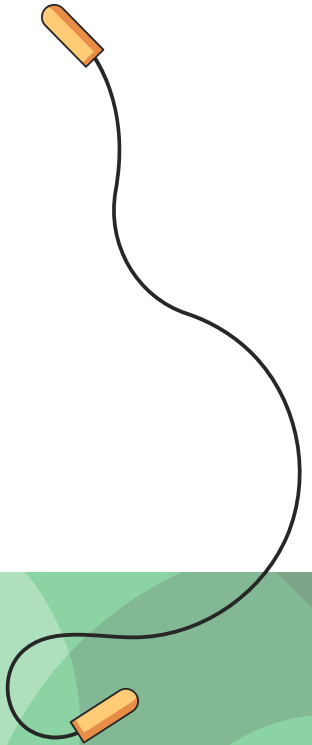
Catboost Model

```
weighted avg       0.65      0.65      0.64        6557

Testing Accuracy
              precision    recall  f1-score   support

         0.0       0.87      0.90      0.88       774
         1.0       0.91      0.88      0.89       866

    accuracy                           0.89      1640
   macro avg       0.89      0.89      0.89      1640
weighted avg       0.89      0.89      0.89      1640
```

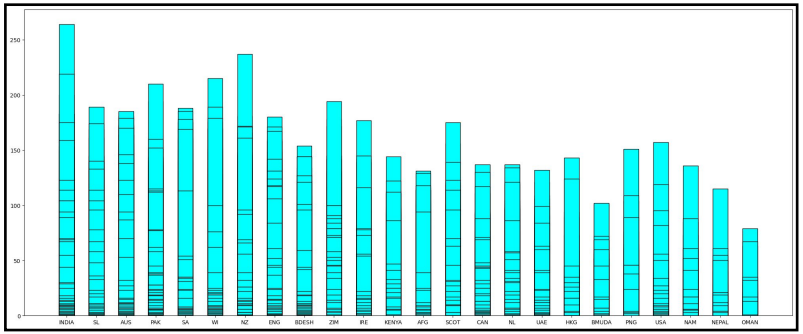
02

Dataset

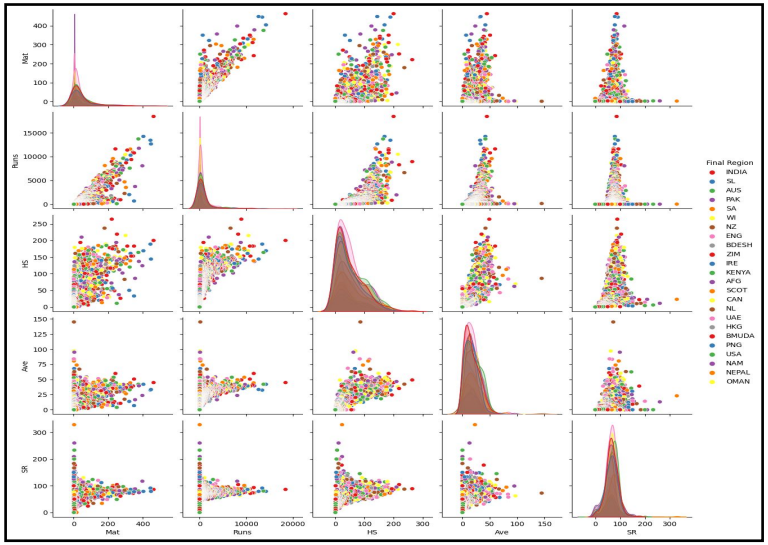


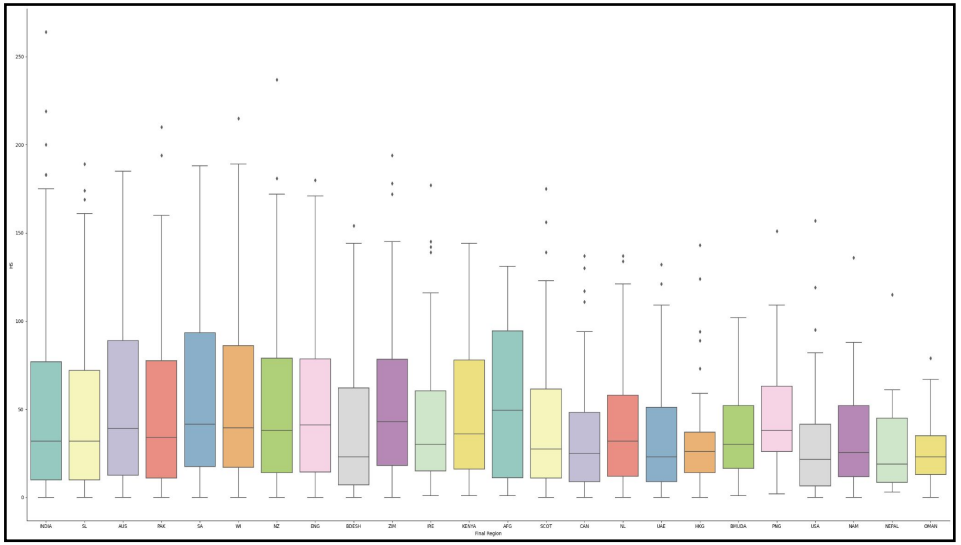


Bar Container showing number of matches played in every region

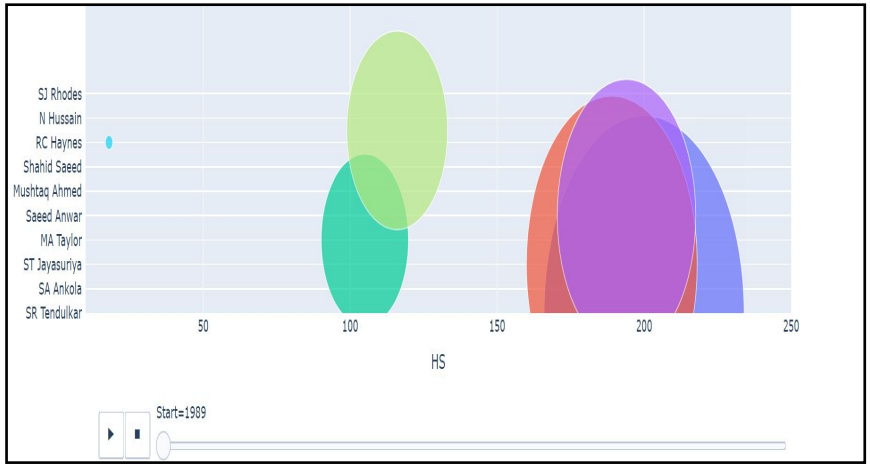


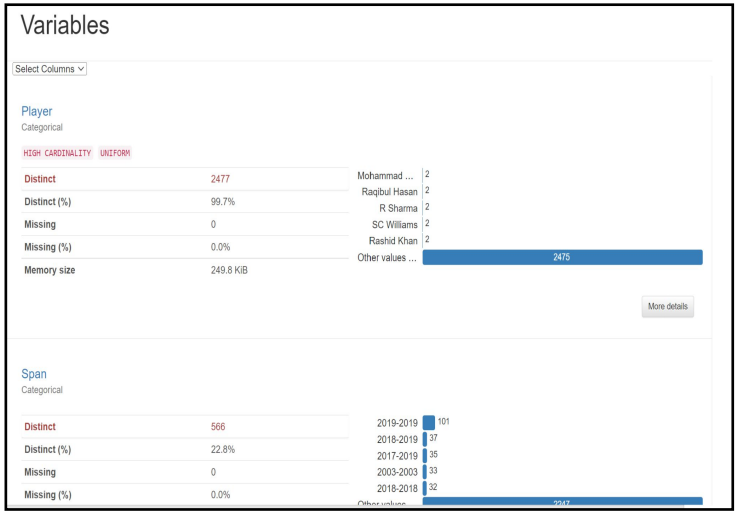
Representing number of matches,runs,HS,SR





Animations(CODING FILE)

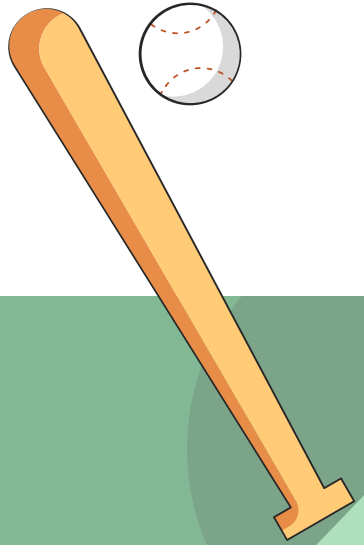


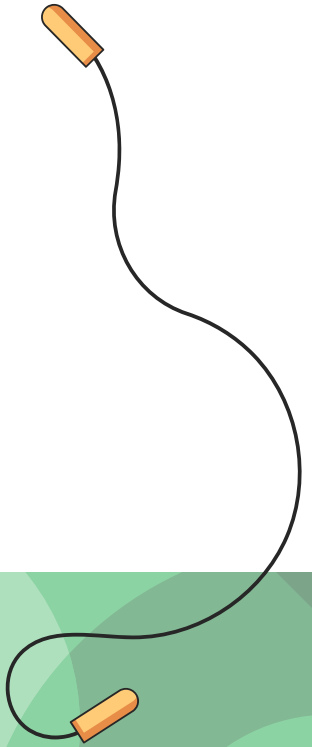


03

Dataset

INDIA vs AUS





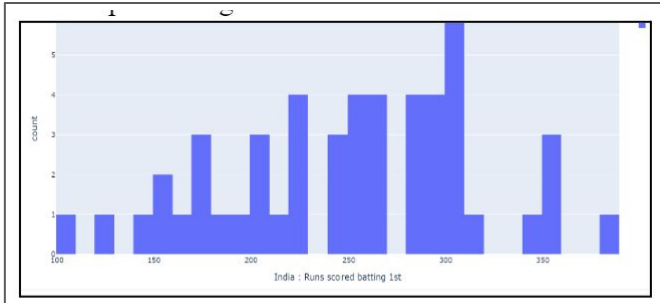


Fig 1. Histogram Chart displaying the number of runs scored by Indians while batting first.

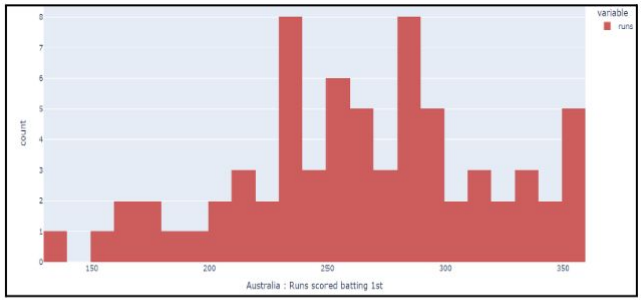


Fig 2. Histogram Chart displaying the number of runs scored by Australians while batting first.

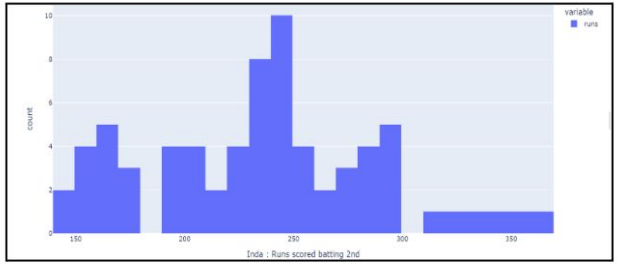


Fig 3. Histogram Chart displaying the number of runs scored by Indians while batting for the second time.

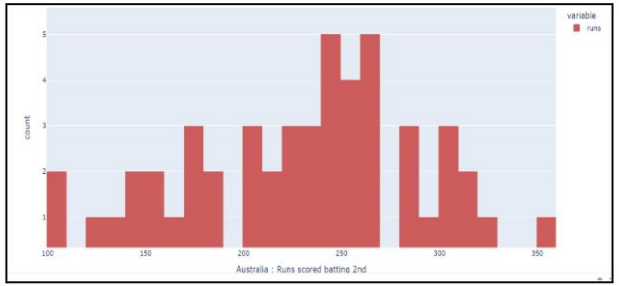


Fig 4. Histogram Chart displaying the number of runs scored by Australians while batting for the second time.

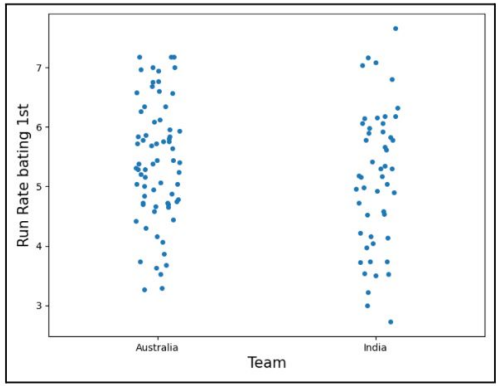


Fig 5. Strip Plot showing the Run Rate while batting first

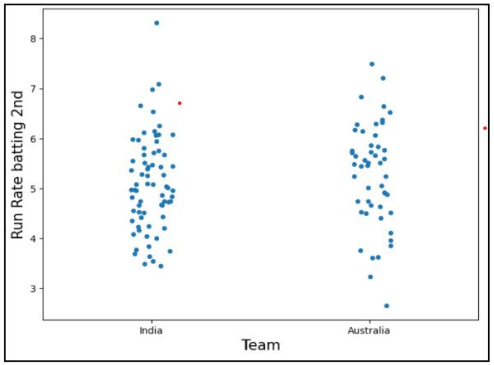


Fig 5. Strip Plot showing the Run Rate while batting

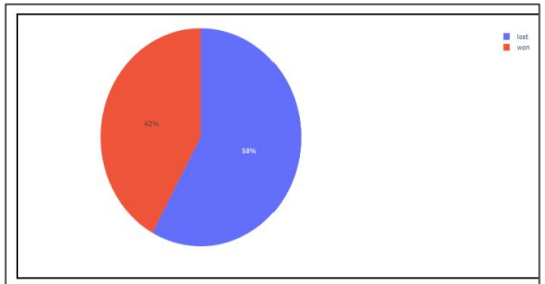


Fig 6. Pie Chart showing the number of times India lost and won while batting for the first time.

Here in the below diagram, It clearly shows that the percentile of India losing to Australia is around 58.6% compared to Australia who are at 41.4% especially when India chose to bat the second time.

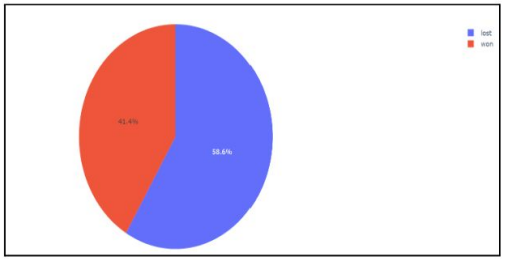
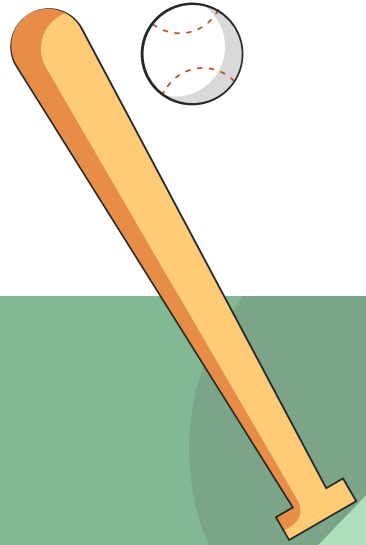


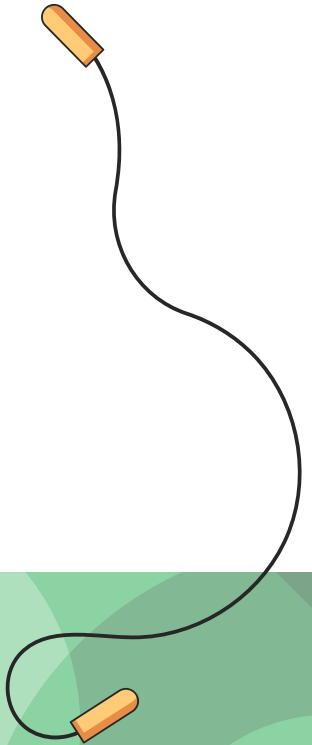
Fig 7. Pie Chart showing the number of times India lost and won while batting for the second time.

04

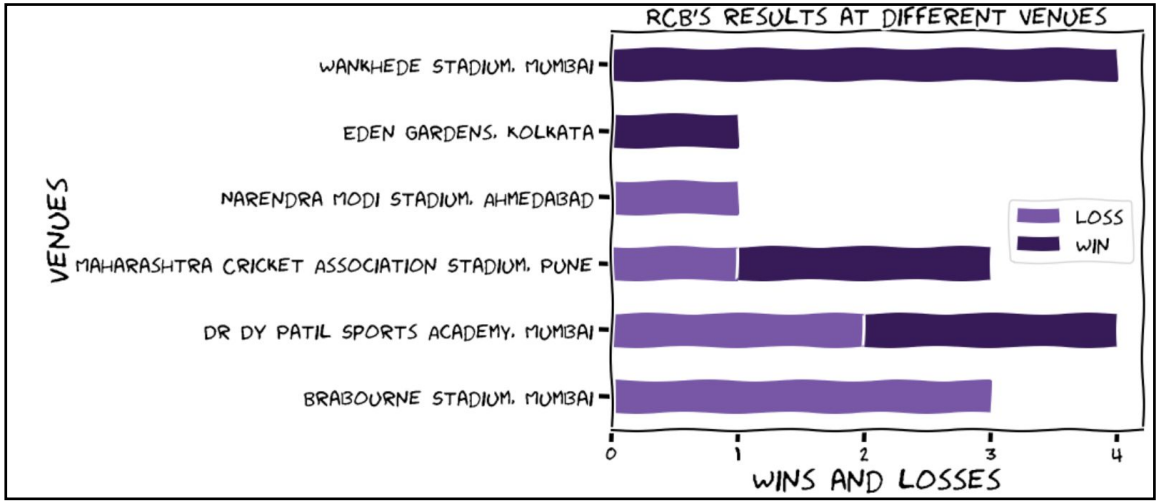
Dataset

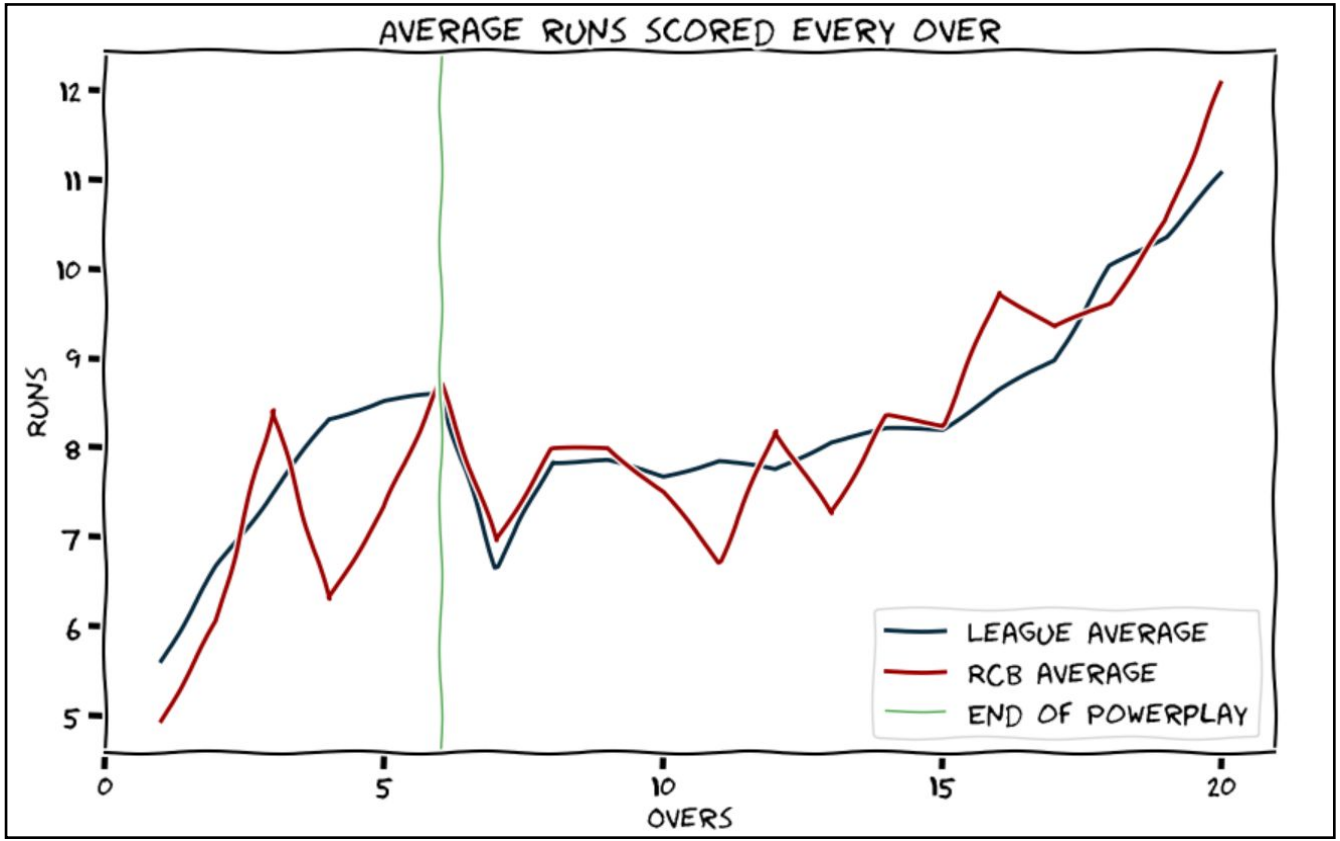
RCB





batter	batsman_run
F du Plessis	468
V Kohli	341
RM Patidar	333
KD Karthik	330
GJ Maxwell	301
Shahbaz Ahmed	219
Anuj Rawat	129
MK Lomror	86
SS Prabhudessai	67
HV Patel	43
PWH de Silva	38
SE Rutherford	33
Mohammed Siraj	30
DJ Willey	18
JR Hazlewood	18




AVERAGE RUNS SCORED EVERY OVER
RUNS
12
11
10
9
8
7
6
5
0
5
10
15
20
OVERS
LEAGUE AVERAGE
RCB AVERAGE
END OF POWERPLAY

Thanks!