Analyzing the teams and the players performance In the Indian Premier League

BY

19MIA1005 MOHIT MADHUKAR MORE

19MIA1037 BHAMIDIPATI NAGA SHRIKRITI

19MIA1049 SAYANTAN NANDY

19MIA1060 GITANSH SAHARAN

19MIA1080 SAMYUKTHA HANCHATE

A project report submitted to

Mr. Edward Jero

In partial fulfilment of the requirements for the course of

CSE - 3044

IN

INTEGRATED M. TECH CSE SPECIALIZATION IN BUSINESS ANALYTICS

VIT UNIVERSITY, CHENNAI

VANDALUR KELAMBAKKAM ROAD

CHENNAI – 600127

BONAFIDE CERTIFICATE

Certified that this project report entitled

"Analyzing the teams and the players performance In the Indian Premier League"

Is a Bonafide work of

19MIA1005 MOHIT MADHUKAR MORE

19MIA1037 B N SHRIKRITI

19MIA1049 SAYANTAN NANDY

19MIA1060 GITANSH SAHARAN

19MIA1080 SAMYUKTHA HANCHATE

who carried out the project work under my supervision and guidance?

Mr. Edward Jero

SCOPE

VIT University Chennai

Tamil Nadu

ACKNOWLEDGEMENT

Primarily, we would like to thank god for giving us the resources and strength for being able to complete this **Analyzing the performance of players and the team in the Indian Premier League** project with success.

Further, we would like express our special thanks and gratitude to our **Information Visualization** faculty **Mr. Edward Jero,** whose valuable guidance has helped us patch this project and make it full proof success. His suggestions and instructions have served as the major contributor towards the completion of this project. Throughout the course, he has always entertained me and shared her knowledge on this topic with great enthusiasm. We would like to thank him for him constant support and encouragement towards making of this project.

We would also take this opportunity to thank **Dr. Jagadish Kannan R., Dean School of Computer Science Engineering (SCOPE),** for extending the facilities of the school towards our project and for his unstinting support.

Finally, we would like to thank our parents and family who have encouraged us throughout this project to come up with new ideas and helped us get through problems with valuable solutions.

We have learnt a lot through this project and feel ourselves prepared to give solutions to upcoming challenges towards Information Visualization

ABSTRACT:

Cricket is one of the most loved sports of the country and Indian Premier league is one of the flagship sports leagues of India, garnering wide attention every year. Every year the sports league is garnering more attention than before. This project is an attempt to analyze the performance of the players and the teams in the Indian premier league and understand the capabilities of various players.

The dataset used in the project has been exploited in the best way possible to visualize it to the maximum extent. Django framework has been used in pycharm IDE and the front end is constructed using html, css and javascript.

The dataset has been visualized in the form of piecharts, bar charts, boxplots, table formats, line graphs.

Key words: *Data set, Cricket, Performance, Players, Visualization*

INTRODUCTION:

The Indian Premier League is conducted every year and the participating teams represent a city in India. This is a professional Twenty-twenty cricket league that is governed by the Board of Control of Cricket in India (BCCI). Various factors affect the game like the skills of the players (like bowling rate, batting rate), their form, the rules of the game and etcetera. Information visualization is a process of visualizing the information in such a way that the information presented is accurate and easy to understand.

Bar charts help in representing the categorical data using rectangular bars. They are used to compare the items between different groups over time. Pie charts are graphs that represent the data in the circular graph, the slices of pie show the relative size of the data. Pie chart is said to be the pictorial representation of data. Box plot is a measure of how well distributed the data is in a data set. It divides the data set into three quartiles and represents the minimum, maximum and median, first quartile and third quartile in the data set.

This project tries to visualize these important factors that determine the player's real position in the team using the visualizing techniques and above mentioned visualization charts.

OBJECTIVES

- To visualize the data set to maximum extent
- To learn the development of a dashboard using the html, css, javascript.
- To apply various visualizing techniques learnt in class
- To use the django framework in the pycharm IDE
- To analyze the players performance and win the match strategically.

REVIEW OF LITERATURE

An extensive online search and thorough research produced very few articles related to players' performance prediction in the gentlemen's game, the game of cricket. It was observed on research that a very small number of researchers have studied the performance of cricket players.

According to Kumash Kapadia, Hussein Abdel – Jaber, Fadi Thabtah, Wael Hadi (2019) applying machine learning for analyzing cricket sports by considering historical games data, players performance, natural parameters, pre-game conditions and other features is beneficial for multiple stakeholders.

Machine learning has become a vast field that consists of many domains' statistics such as artificial intelligence, information technology and others say Daniel Mago Vistro, Faizan Rasheed (2019). It was observed that to calculate the cricket winner in IPL, decision tree model was not perfect according to the requirements so the parameters of Decision Tree were fine tuned. After the changes, it was successfully predicted the winner by 94.87%. It meant that tuning of parameters has made the model better and more accurate.

Parker, Burns and Natarajan (2011) defined a model for valuation of players for IPL auction, considering the factors like their previous bidding price of player, experience of the player and strike rate.

The data of the matches from official website of the Indian Premier League was extracted and the data was analyzed using some key features by Ayesha Choudhary and A. Rabindra Lamsal (2018). They used the scikit-learn machine learning library to pre-process the data by removing low variance, univariate and recursive features.

Muthuswamy and S.S. Lam (2008) carried out a similar study predicting how many wickets will a bowler take using neutral networks. The major drawback in this study was, it was limited to eight Indian bowlers and hence could not be generalized for all the bowlers in the world.

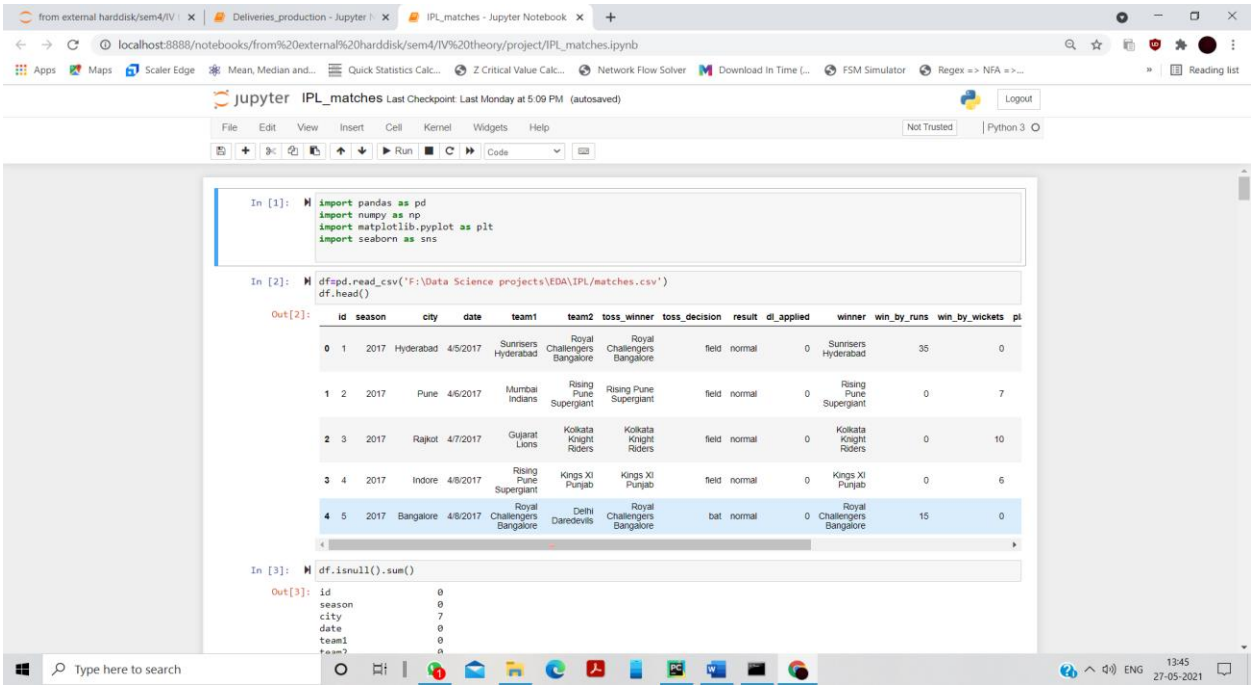
According to the predictions made by B. Abhishek Naik, Shivanee Pawar, Minakshee Naik and Sahil Mulani (2018) before the match starts, their predictions depend upon the factors like batting, bowling, captain of both the teams and batting-bowling stats on the ground against that opponent and after the match starts their prediction depends on batsman bowler performance. This has been done for the ODI matches using logistic regression and K means clustering. The predictions can go wrong sometimes since it fluctuates on every ball.

Bayers classifier was proved to be having the best accuracy among all the machine learning alogrithms – Support vector machine, logistic regression, decision tree and bayers classifier that have been used to predict the match result according to Egeddam Jaishankar Harshit, Rajkumar S.

METHODOLOGY

The following two datasets have been taken for the project:

Matches.csv



```
In [1]: import pandas as pd
        import numpy as np
        import matplotlib.pyplot as plt
        import seaborn as sns

In [2]: df=pd.read_csv('F:\Data Science projects\EDA\IPL/matches.csv')
        df.head()
```

Out[2]:

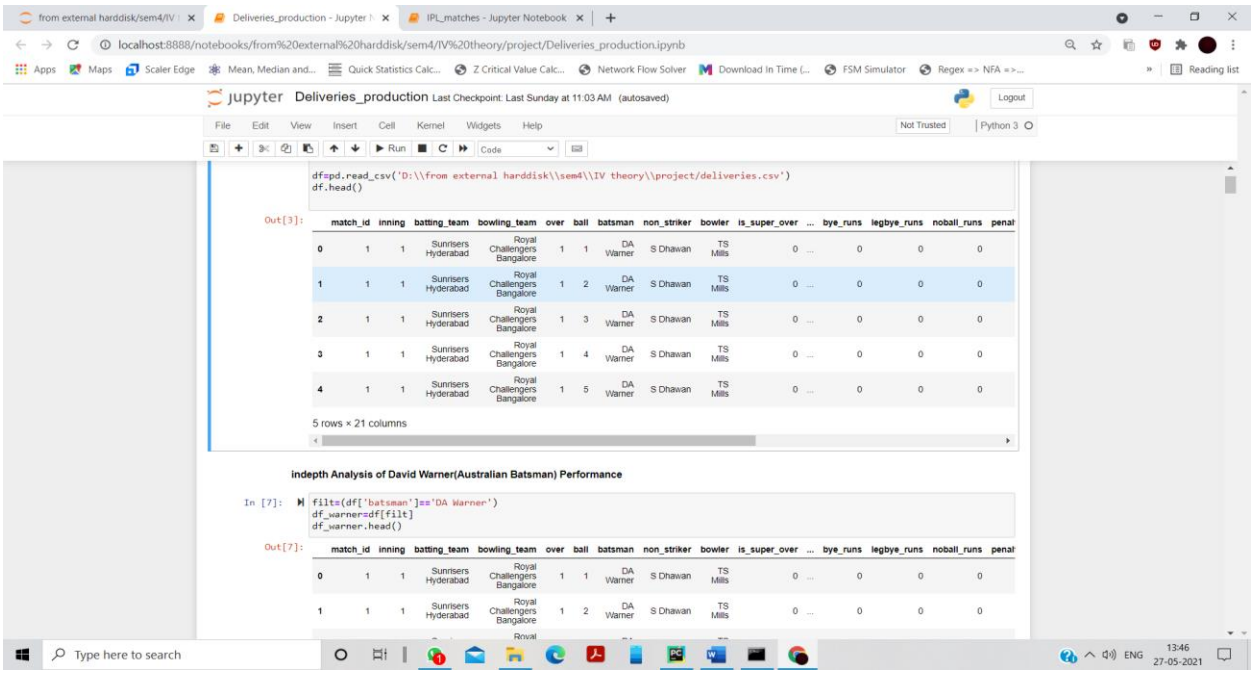
	id	season	city	date	team1	team2	toss_winner	toss_decision	result	dl_applied	winner	win_by_runs	win_by_wickets	pl
0	1	2017	Hyderabad	4/5/2017	Sunrisers Hyderabad	Royal Challengers Bangalore	Royal Challengers Bangalore	field	normal	0	Sunrisers Hyderabad	35	0	
1	2	2017	Pune	4/6/2017	Mumbai Indians	Rising Pune Supergiant	Rising Pune Supergiant	field	normal	0	Rising Pune Supergiant	0	7	
2	3	2017	Rajkot	4/7/2017	Gujarat Lions	Kolkata Knight Riders	Kolkata Knight Riders	field	normal	0	Kolkata Knight Riders	0	10	
3	4	2017	Indore	4/8/2017	Rising Pune Supergiant	Kings XI Punjab	Kings XI Punjab	field	normal	0	Kings XI Punjab	0	6	
4	5	2017	Bangalore	4/8/2017	Royal Challengers Bangalore	Delhi Daredevils	Royal Challengers Bangalore	bat	normal	0	Royal Challengers Bangalore	15	0	

```
In [3]: df.isnull().sum()
```

Out[3]:

```
id              0
season          0
city            7
date            0
team1           0
team2           0
```

Deliveries.csv



```
In [6]: df=pd.read_csv('D:\\from external harddisk\\sem4\\IV theory\\project/deliveries.csv')
        df.head()
```

Out[3]:

	match_id	inning	batting_team	bowling_team	over	ball	batsman	non_striker	bowler	is_super_over	...	bye_runs	legbye_runs	noball_runs	penal
0	1	1	Sunrisers Hyderabad	Royal Challengers Bangalore	1	1	DA Warner	S Dhawan	TS Mills	0	...	0	0	0	
1	1	1	Sunrisers Hyderabad	Royal Challengers Bangalore	1	2	DA Warner	S Dhawan	TS Mills	0	...	0	0	0	
2	1	1	Sunrisers Hyderabad	Royal Challengers Bangalore	1	3	DA Warner	S Dhawan	TS Mills	0	...	0	0	0	
3	1	1	Sunrisers Hyderabad	Royal Challengers Bangalore	1	4	DA Warner	S Dhawan	TS Mills	0	...	0	0	0	
4	1	1	Sunrisers Hyderabad	Royal Challengers Bangalore	1	5	DA Warner	S Dhawan	TS Mills	0	...	0	0	0	

5 rows × 21 columns

indepth Analysis of David Warner(Australian Batsman) Performance

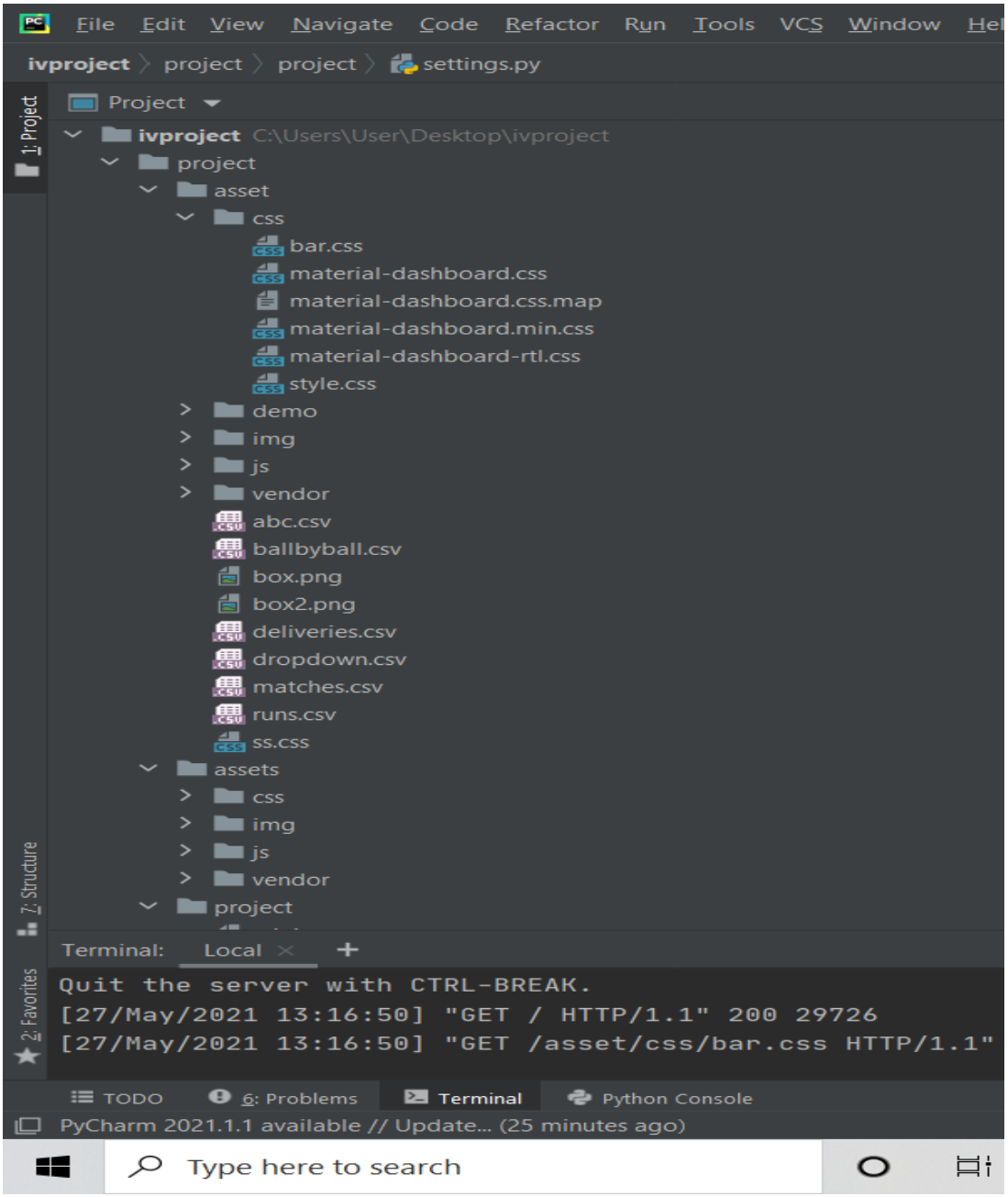
```
In [7]: filt=(df['batsman']=='DA Warner')
        df_warner=df[filt]
        df_warner.head()
```

Out[7]:

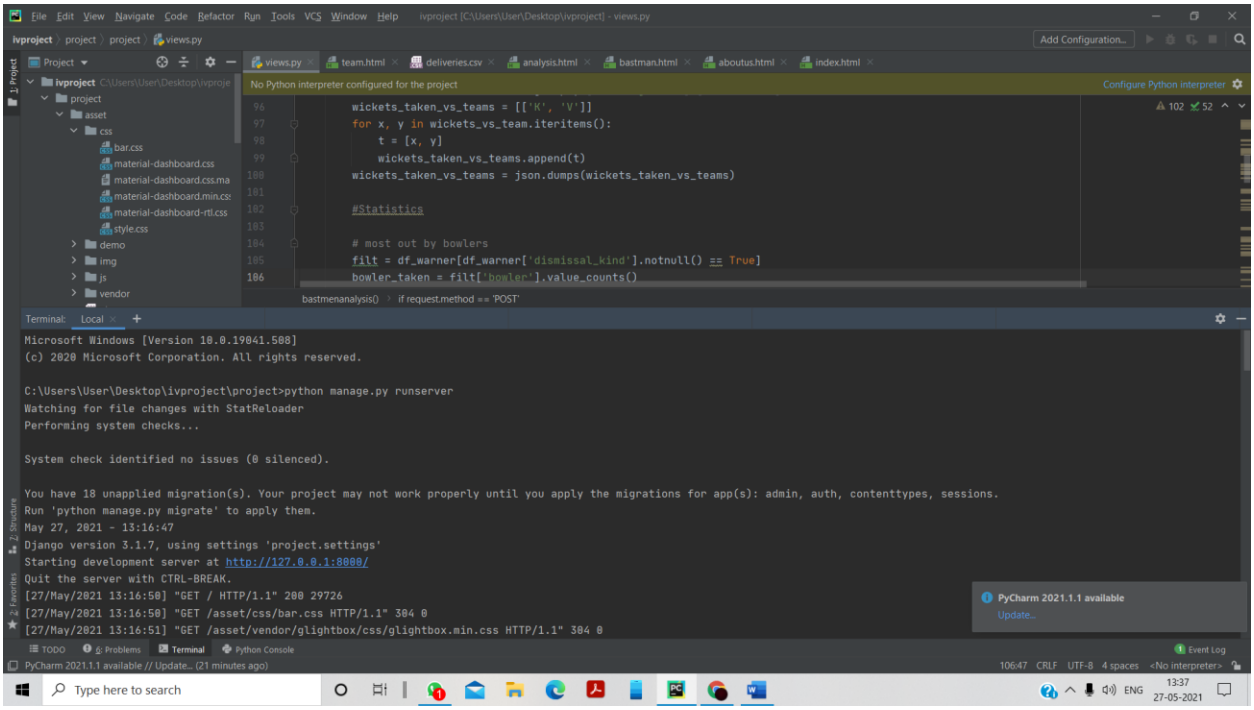
	match_id	inning	batting_team	bowling_team	over	ball	batsman	non_striker	bowler	is_super_over	...	bye_runs	legbye_runs	noball_runs	penal
0	1	1	Sunrisers Hyderabad	Royal Challengers Bangalore	1	1	DA Warner	S Dhawan	TS Mills	0	...	0	0	0	
1	1	1	Sunrisers Hyderabad	Royal Challengers Bangalore	1	2	DA Warner	S Dhawan	TS Mills	0	...	0	0	0	

We have used the pycharm IDE and set up the necessary environment for the project.

The project diary is shown below.



- Django is a framework that connects the front end with the back end. we have used the Django framework in pycharm IDE
- The libraries imported for the project are pandas, numpy, matplotlib and seaborn. Matplotlib and seaborn have been imported to visualize the boxplots. SciPy is a collection of open-source code libraries for maths, science and engineering. NumPy, pandas and Matplotlib are libraries that fall under this umbrella of SciPy.
- Pandas is an open-source Python library providing efficient, easy to use data structure and data analysis tools.
- Matplotlib is a python library that is specifically designers for the development of graphs, charts in order to provide interactive data visualization. It is inspired from MATLAB software and reproduces many of its features.
- The front end has been developed using html, css and JavaScript.
- Google charts has been used on the front end for better visualization.



SOURCE CODE:

BACKEND:

Urls.py

```
"""project URL Configuration

The `urlpatterns` list routes URLs to views. For more information please see:
    https://docs.djangoproject.com/en/3.2/topics/http/urls/
Examples:
Function views
    1. Add an import:  from my_app import views
    2. Add a URL to urlpatterns:  path('', views.home, name='home')
Class-based views
    1. Add an import:  from other_app.views import Home
    2. Add a URL to urlpatterns:  path('', Home.as_view(), name='home')
Including another URLconf
    1. Import the include() function: from django.urls import include, path
    2. Add a URL to urlpatterns:  path('blog/', include('blog.urls'))
"""

from django.conf import settings
from django.conf.urls.static import static
from django.contrib import admin
from django.urls import path

from . import views

urlpatterns = [
    path('admin/', admin.site.urls),
    path('', views.index, name='index'),
    path('aboutus.html',  views.aboutus , name='aboutus'),
    path('index.html', views.index , name='index2'),
    path('bastman.html',views.bastmenanalysis , name='bastman'),
    path('team.html',views.team , name='team'),
    path('analysis.html',views.analysis , name='analysis'),
    path('timepass.html',views.timepass , name ='timepass')
]
if settings.DEBUG:
    urlpatterns += static(settings.MEDIA_URL,
document_root=settings.MEDIA_ROOT)
```

Views.py

```
from django.shortcuts import render
import pandas as pd
import numpy as np
import statistics
import seaborn as sns
import matplotlib.pyplot as plt
import json

def index(request):
    df = pd.read_csv('asset/dropdown.csv')
    lists = df['batsman']
    lists2 = df['team'].dropna()
    return render(request , 'index.html', {'list' : lists,'list2':lists2} )

def aboutus(request):

    return render(request,'aboutus.html')

def index2(request):

    return render(request , 'index.html')

def bastmenanalysis(request):
    if request.method == 'POST':
        df = pd.read_csv('asset/deliveries.csv')
        Teams = {
            'Royal Challengers Bangalore': 'RCB',
            'Sunrisers Hyderabad': 'SRH',
            'Rising Pune Supergiant': 'RPS',
            'Mumbai Indians': 'MI',
            'Kolkata Knight Riders': 'KKR',
            'Gujarat Lions': 'GL',
            'Kings XI Punjab': 'KXIP',
            'Delhi Daredevils': 'DD',
            'Chennai Super Kings': 'CSK',
            'Rajasthan Royals': 'RR',
            'Deccan Chargers': 'DC',
            'Kochi Tuskers Kerala': 'KTK',
            'Pune Warriors': 'PW',
            'Rising Pune Supergiants': 'RPS'
        }

        df['batting_team'] = df['batting_team'].map(Teams)
        df['bowling_team'] = df['bowling_team'].map(Teams)
        name = request.POST.get('playername')
        print(name)
        filt = (df['batsman'] == name)
        df_warner = df[filt]

        #Runs vs Teams
        runs_vs_teams =
df_warner.groupby(['bowling_team'])['batsman_runs'].sum()
        runs_scored_vs_teams = [['K','V']]
        for x, y in runs_vs_teams.iteritems():
```

```
            t = [x, y]
            runs_scored_vs_teams.append(t)
        print(runs_scored_vs_teams)
        runs_scored_vs_teams = json.dumps(runs_scored_vs_teams)


        # Dismissal Kind of Player
        c = df_warner['dismissal_kind'].value_counts()
        k = [['K', 'V']]
        for x, y in c.iteritems():
            t = [x, y]
            k.append(t)
        dis_kind = json.dumps(k)

        # ball wise contribution of player
        one = count(df_warner,1)
        two = count(df_warner,2)
        three = count(df_warner,3)
        four = count(df_warner,4)
        six = count(df_warner,6)
        runs_cont =
[['K','V'],['One',one],['Two',two],['Three',three],['Four',four],['Six',six]]
        runs_cont = json.dumps(runs_cont)


        # most wicket taken of while bowling

        filt = (df['bowler'] == name)
        df_bowler = df[filt]
        df_bowler = df_bowler[df_bowler['dismissal_kind'].notnull() == True]
        most_wicket_by_bowler = df_bowler['batsman'].value_counts()
        most_wicket_taken = []
        i = 0
        for x, y in most_wicket_by_bowler.iteritems():
            t = [x, y]
            most_wicket_taken.append(t)
            i = i + 1
            if i > 5:
                break
        most_wicket_taken = json.dumps(most_wicket_taken)

        # Wickets Vs Teams
        wickets_vs_team =
df_bowler.groupby(['batting_team'])['is_wicket'].sum()
        wickets_taken_vs_teams = [['K', 'V']]
        for x, y in wickets_vs_team.iteritems():
            t = [x, y]
            wickets_taken_vs_teams.append(t)
        wickets_taken_vs_teams = json.dumps(wickets_taken_vs_teams)

        #Statistics

        # most out by bowlers
        filt = df_warner[df_warner['dismissal_kind'].notnull() == True]
        bowler_taken = filt['bowler'].value_counts()
        most_wicket = []
        i=0
```

```
        for x, y in bowler_taken.iteritems():
            t = [x, y]
            most_wicket.append(t)
            i=i+1
            if i>5:
                break
        most_wicket = json.dumps(most_wicket)

        t = json.dumps(name)
        ecom = {'diskind': dis_kind,'runscont':runs_cont, 'name': t,
'most_wic' : most_wicket,
'most_wicket_taken':most_wicket_taken,'runs_vs_teams':runs_scored_vs_teams
                ,'wickets_taken_vs_teams': wickets_taken_vs_teams}
        return render(request, 'bastman.html', ecom)
    ecom = {'k' :10}
    return render(request, 'bastman.html', ecom)

def team(request):
    if request.method == 'POST':
        df = pd.read_csv('asset/deliveries.csv')
        name = request.POST.get('teamname')

        filt = (df['batting_team'] == name)
        df_batting = df[filt]

        Teams = {
            'Royal Challengers Bangalore': 'RCB',
            'Sunrisers Hyderabad': 'SRH',
            'Rising Pune Supergiant': 'RPS',
            'Mumbai Indians': 'MI',
            'Kolkata Knight Riders': 'KKR',
            'Gujarat Lions': 'GL',
            'Kings XI Punjab': 'KXIP',
            'Delhi Daredevils': 'DD',
            'Chennai Super Kings': 'CSK',
            'Rajasthan Royals': 'RR',
            'Deccan Chargers': 'DC',
            'Kochi Tuskers Kerala': 'KTK',
            'Pune Warriors': 'PW',
            'Rising Pune Supergiants': 'RPS'
        }

        df_batting['batting_team'] = df_batting['batting_team'].map(Teams)
        df_batting['bowling_team'] = df_batting['bowling_team'].map(Teams)

        # Runs Scored vs All Teams

        runs_vs_teams = df_batting.groupby(['match_id',
'bowling_team'])['total_runs'].sum()

        K =[]
        for x, y in runs_vs_teams.iteritems():
            t = [x[0],x[1], y]
            K.append(t)
        runs_vs_teams = pd.DataFrame(K,columns=['match_id',
'bowling_team','total'])
        runs_vs_teams2 = runs_vs_teams
```

```
        runs_vs_teams =
round(runs_vs_teams.groupby(['bowling_team']).mean(),0)
        runs_vs_teams = pd.DataFrame(runs_vs_teams)
        runs_vs_teams.to_csv('asset/abc.csv')
        runs_vs_teams = pd.read_csv('asset/abc.csv')

        a1 = runs_vs_teams['bowling_team'].to_list()
        a2 = runs_vs_teams['total'].to_list()

        k = [['Team Name', 'V']]

        for x, y in zip(a1, a2):
            t = [x, y]
            k.append(t)
        runs_scored_vs_teams = json.dumps(k)

        #highest runs for Team

        highest_runs = df_batting.groupby(['batsman'])['batsman_runs'].sum()
        highest_runs= highest_runs.sort_values(ascending=False)[:10]
        highest_runs_vs_teams = [['K', 'V']]
        for x, y in highest_runs.iteritems():
            t = [x, y]
            highest_runs_vs_teams.append(t)
        highest_runs_vs_teams = json.dumps(highest_runs_vs_teams)

        #boxplot Runs scored vs all teams
        fig, ax = plt.subplots()
        sns.boxplot(x='bowling_team', y='total', data=runs_vs_teams2, ax=ax)
        plt.savefig('asset/box2.png')

        t = json.dumps(name)
        ecom ={'name':t,'runs_scored_vs_teams':runs_scored_vs_teams
,'highest_runs_vs_teams' :highest_runs_vs_teams}
        return render(request, 'team.html',ecom)



def analysis(request):
    df = pd.read_csv('asset/deliveries.csv')
    df_matches = pd.read_csv('asset/matches.csv')

    # score>200 runs agaist batting team
    high_200 = df.groupby(['match_id', 'inning', 'batting_team',
'bowling_team'])['total_runs'].sum().reset_index()

    high_200.set_index(['match_id'], inplace=True)
    highestscore = high_200['total_runs'].max()
    # score more then 200
    high = high_200.rename(columns={'total_runs': 'count'})
    high = high[high['count'] >= 200].groupby(['inning', 'batting_team',
'bowling_team']).count()

    # params = {'more200': val1,'highestscore':highestscore}
    # max runs of player
```

```
    max_runs = df.groupby(['batsman'])['batsman_runs'].sum()
    maxrun = max_runs.sort_values(ascending=False)[:10]

    k = [['K', 'V']]
    for x, y in maxrun.iteritems():
        t = [x, y]
        k.append(t)
    max1 = json.dumps(k)

    df['dismissal_kind'].unique()
    dismissal_kinds = ['caught', 'bowled', 'lbw', 'caught and bowled',
                       'stumped', 'hit wicket']
    hwt = df[df["dismissal_kind"].isin(dismissal_kinds)]
    hwt.head()
    highestwicket = hwt['bowler'].value_counts()[:10]
    b = [['K', 'V']]
    for x, y in highestwicket.iteritems():
        t = [x, y]
        b.append(t)
    highestwicket = json.dumps(b)


    #Toss Winning
    toss_win =df_matches['toss_winner'].value_counts().sort_values()
    k = [['K', 'Bar', 'Line']]
    for x, y in toss_win.iteritems():
        t = [x, y,y]
        k.append(t)
    toss_win = json.dumps(k)

    # highest runs for Team

    # runs = df.groupby(['match_id', 'inning',
'batting_team'])[['total_runs']].sum().reset_index()
    # runs.drop('match_id', axis=1, inplace=True)
    # inning1 = runs[runs['inning'] == 1]
    # inning2 = runs[runs['inning'] == 2]

    # highest_runs = highest_runs.sort_values(ascending=False)[:10]
    # highest_runs_vs_teams = [['K', 'V']]
    # for x, y in highest_runs.iteritems():
    #     t = [x, y]
    #     highest_runs_vs_teams.append(t)
    # highest_runs_vs_teams = json.dumps(highest_runs_vs_teams)

    #Most MOM
    most_mom = df_matches['player_of_match'].value_counts()
    k = []
    i =0
    for x, y in most_mom.iteritems():
        t = [x, y]
        k.append(t)
        if i>9:
            break
        i=i+1
    most_mom = json.dumps(k)
```

```
    # Total Wins
    matches_played_byteams = pd.concat([df_matches['team1'],
df_matches['team2']], axis=1)
    teams = (matches_played_byteams['team1'].value_counts() +
matches_played_byteams[
        'team2'].value_counts()).reset_index()
    teams.columns = ['team_name', 'Matches_played']
    matches_played_byteams = pd.concat([df_matches['team1'],
df_matches['team2']], axis=1)
    wins = pd.DataFrame(df_matches['winner'].value_counts()).reset_index()
    wins.columns = ['team_name', 'wins']
    player = teams.merge(wins, left_on='team_name', right_on='team_name',
how='inner')
    player.columns = ['team', 'matches_played', 'wins']
    player['win_per'] = (player['wins'] / player['matches_played']) * 100
    player = player.iloc[:, [0,3]]

    a1 = player['team'].to_list()
    a2 = player['win_per'].to_list()

    k = [['K', 'V']]

    for x, y in zip(a1,a2):
        t = [x, y]
        k.append(t)
    most_wins = json.dumps(k)

    #runs scored Distribution - boxplot

    Teams = {
        'Royal Challengers Bangalore': 'RCB',
        'Sunrisers Hyderabad': 'SRH',
        'Rising Pune Supergiant': 'RPS',
        'Mumbai Indians': 'MI',
        'Kolkata Knight Riders': 'KKR',
        'Gujarat Lions': 'GL',
        'Kings XI Punjab': 'KXIP',
        'Delhi Daredevils': 'DD',
        'Chennai Super Kings': 'CSK',
        'Rajasthan Royals': 'RR',
        'Deccan Chargers': 'DC',
        'Kochi Tuskers Kerala': 'KTK',
        'Pune Warriors': 'PW',
        'Rising Pune Supergiants': 'RPS'
    }

    df['batting_team'] = df['batting_team'].map(Teams)
    df['bowling_team'] = df['bowling_team'].map(Teams)

    runs = df.groupby(['match_id', 'inning',
'batting_team'])[['total_runs']].sum().reset_index()
    fig, ax = plt.subplots()
    sns.boxplot(x='batting_team', y='total_runs', data=runs, ax=ax)
    plt.savefig('asset/box.png')


    params = {'more': high, 'maxscore': highestscore, 'maxruns': max1,
```

```
'highestwicket': highestwicket,'toss_win':toss_win
             ,'most_mom':most_mom, 'most_wins':most_wins ,}

    return render(request, 'analysis.html', params)




def count(df,runs):
    return len(df[df['batsman_runs']==runs])*runs

def timepass(request):
    # runs scored Distribution - boxplot

    # runs = df.groupby(['match_id', 'inning',
'batting_team'])[['total_runs']].sum().reset_index()
    # runs = pd.DataFrame(runs)
    # runs = runs.groupby(['batting_team'])['total_runs'].describe()
    # runs = pd.DataFrame(runs)
    # runs.to_csv('asset/runs.csv')

    runs = pd.read_csv('asset/runs.csv')

    print(runs)
    runs = round(runs)
    batting_team = runs['batting_team'].to_list()
    min = runs['min'].to_list()
    firstQur = runs['25%'].to_list()
    median = runs['50%'].to_list()
    thirdqur = runs['75%'].to_list()
    max = runs['max'].to_list()

    distribution = []

    for z, a, b, c, d, e in zip(batting_team, max, min, firstQur, median,
thirdqur):
        t = [z, a, b, c, d, e]
        distribution.append(t)

    # distribution = json.dumps(distribution)


    return render(request, 'timepass.html',{'distribution':distribution})
```

Settings .py

```
"""
Django settings for project project.

Generated by 'django-admin startproject' using Django 3.2.

For more information on this file, see
https://docs.djangoproject.com/en/3.2/topics/settings/

For the full list of settings and their values, see
https://docs.djangoproject.com/en/3.2/ref/settings/
"""
import os
from pathlib import Path

# Build paths inside the project like this: BASE_DIR / 'subdir'.
BASE_DIR = Path(__file__).resolve().parent.parent


# Quick-start development settings - unsuitable for production
# See https://docs.djangoproject.com/en/3.2/howto/deployment/checklist/

# SECURITY WARNING: keep the secret key used in production secret!
SECRET_KEY = 'django-insecure-$uv8$@$_)qi#wi-
v2536xf&)^3r#im5m6m)86shy$v54l@!#vz'

# SECURITY WARNING: don't run with debug turned on in production!
DEBUG = True

ALLOWED_HOSTS = []


# Application definition

INSTALLED_APPS = [
    'django.contrib.admin',
    'django.contrib.auth',
    'django.contrib.contenttypes',
    'django.contrib.sessions',
    'django.contrib.messages',
    'django.contrib.staticfiles',
]

MIDDLEWARE = [
    'django.middleware.security.SecurityMiddleware',
    'django.contrib.sessions.middleware.SessionMiddleware',
    'django.middleware.common.CommonMiddleware',
    'django.middleware.csrf.CsrfViewMiddleware',
    'django.contrib.auth.middleware.AuthenticationMiddleware',
    'django.contrib.messages.middleware.MessageMiddleware',
    'django.middleware.clickjacking.XFrameOptionsMiddleware',
]

ROOT_URLCONF = 'project.urls'
```

```
TEMPLATES = [
    {
        'BACKEND': 'django.template.backends.django.DjangoTemplates',
        'DIRS': [BASE_DIR / 'templates'],
        'APP_DIRS': True,
        'OPTIONS': {
            'context_processors': [
                'django.template.context_processors.debug',
                'django.template.context_processors.request',
                'django.contrib.auth.context_processors.auth',
                'django.contrib.messages.context_processors.messages',
            ],
        },
    },
]

WSGI_APPLICATION = 'project.wsgi.application'


# Database
# https://docs.djangoproject.com/en/3.2/ref/settings/#databases

DATABASES = {
    'default': {
        'ENGINE': 'django.db.backends.sqlite3',
        'NAME': BASE_DIR / 'db.sqlite3',
    }
}


# Password validation
# https://docs.djangoproject.com/en/3.2/ref/settings/#auth-password-
validators

AUTH_PASSWORD_VALIDATORS = [
    {
        'NAME':
'django.contrib.auth.password_validation.UserAttributeSimilarityValidator',
    },
    {
        'NAME':
'django.contrib.auth.password_validation.MinimumLengthValidator',
    },
    {
        'NAME':
'django.contrib.auth.password_validation.CommonPasswordValidator',
    },
    {
        'NAME':
'django.contrib.auth.password_validation.NumericPasswordValidator',
    },
]


# Internationalization
# https://docs.djangoproject.com/en/3.2/topics/i18n/
```

```
LANGUAGE_CODE = 'en-us'

TIME_ZONE = 'UTC'

USE_I18N = True

USE_L10N = True

USE_TZ = True


# Static files (CSS, JavaScript, Images)
# https://docs.djangoproject.com/en/3.2/howto/static-files/

STATIC_URL = '/static/'

# Default primary key field type
# https://docs.djangoproject.com/en/3.2/ref/settings/#default-auto-field

DEFAULT_AUTO_FIELD = 'django.db.models.BigAutoField'


MEDIA_ROOT = os.path.join(BASE_DIR,'asset')
MEDIA_URL = '/asset/'
```

SOURCE CODE:

FRONT END:

Index.html

```
<!DOCTYPE html>
<html lang="en">

<head>
    <!--
==========================================================================  -->
    <!---------------------------- important links ------------------------
--->
    <!--
==========================================================================  -->
  <meta charset="utf-8">
  <meta content="width=device-width, initial-scale=1.0" name="viewport">

<meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css">
  <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-
awesome/4.7.0/css/font-awesome.min.css">
  <script
src="https://ajax.googleapis.com/ajax/libs/jquery/3.2.1/jquery.min.js"></scri
pt>
  <script
src="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/js/bootstrap.min.js"></s
cript>

  <title>Index</title>
  <meta content="" name="description">
  <meta content="" name="keywords">

  <!-- Google Fonts -->
  <link
href="https://fonts.googleapis.com/css?family=Open+Sans:300,300i,400,400i,600
,600i,700,700i|Raleway:300,300i,400,400i,500,500i,600,600i,700,700i|Poppins:3
00,300i,400,400i,500,500i,600,600i,700,700i" rel="stylesheet">

  <!-- Vendor CSS Files -->

<link href="//maxcdn.bootstrapcdn.com/bootstrap/4.0.0/css/bootstrap.min.css"
rel="stylesheet" id="bootstrap-css">
<script
src="//maxcdn.bootstrapcdn.com/bootstrap/4.0.0/js/bootstrap.min.js"></script>
<script src="//code.jquery.com/jquery-1.11.1.min.js"></script>
 <link href="asset/css/bar.css" rel="stylesheet">
  <link href="asset/vendor/animate.css/animate.min.css" rel="stylesheet">
  <link href="asset/vendor/aos/aos.css" rel="stylesheet">
  <link href="asset/vendor/bootstrap/css/bootstrap.min.css" rel="stylesheet">
  <link href="asset/vendor/bootstrap-icons/bootstrap-icons.css"
rel="stylesheet">
```

```
  <link href="asset/vendor/boxicons/css/boxicons.min.css" rel="stylesheet">
  <link href="asset/vendor/glightbox/css/glightbox.min.css" rel="stylesheet">
  <link href="asset/vendor/remixicon/remixicon.css" rel="stylesheet">
  <link href="asset/vendor/swiper/swiper-bundle.min.css" rel="stylesheet">
   <link rel="stylesheet"
href="https://stackpath.bootstrapcdn.com/bootstrap/4.1.3/css/bootstrap.min.cs
s" integrity="sha384-
MCw98/SFnGE8fJT3GXwEOngsV7Zt27NXFoaoApmYm81iuXoPkFOJwJ8ERdknLPMO"
crossorigin="anonymous">
    <link rel="stylesheet"
href="https://use.fontawesome.com/releases/v5.5.0/css/all.css"
integrity="sha384-
B4dIYHKNBt8Bc12p+WXckhzcICo0wtJAoU8YZTY5qE0Id1GSseTk6S+L3BlXeVIU"
crossorigin="anonymous">
   <link
href="//maxcdn.bootstrapcdn.com/bootstrap/4.1.1/css/bootstrap.min.css"
rel="stylesheet" id="bootstrap-css">
<script
src="//maxcdn.bootstrapcdn.com/bootstrap/4.1.1/js/bootstrap.min.js"></script>
<script
src="//cdnjs.cloudflare.com/ajax/libs/jquery/3.2.1/jquery.min.js"></script>

  <!-- Template Main CSS File -->
  <link href="asset/css/style.css" rel="stylesheet">
    <link href="ss.css" rel="stylesheet">

    <!--
========================================================================== -->
    <!---------------------------- important links end----------------------
------>
    <!--
========================================================================== -->
</head>

<body>

  <!-- ======= Header ======= -->
  <header id="header" class="fixed-top d-flex align-items-center  header-
transparent ">
    <div class="container d-flex align-items-center justify-content-between">

      <div class="logo">
        <h1><a href="index.html">Cricket Analysis</a></h1>


      </div>

      <nav id="navbar" class="navbar">
        <ul>
          <li><a class="nav-link scrollto active"
href="index.html">Home</a></li>
          <li><a class="nav-link scrollto" href="aboutus.html">About</a></li>
          <li><a class="nav-link scrollto"
href="analysis.html">Analyze</a></li>
       <li><a class="openBtn"  onclick="openSearch()" class="btn openBtn"
>Open Search Box</a></li>
```

```
        </ul>

        <i class="bi bi-list mobile-nav-toggle"></i>
      </nav><!-- .navbar -->

    </div>
  </header><!-- End Header -->

  <!-- ======= Hero Section ======= -->

  <section id="hero" class="d-flex flex-column justify-content-end align-
items-center">

    <div id="heroCarousel" data-bs-interval="5000" class="container carousel
carousel-fade" data-bs-ride="carousel">


      <div class="carousel-item active">
        <div class="carousel-container" >
          <h2 class="animate__animated animate__fadeInDown">Welcome to  the
<span>Ground of </span><span class="typed" data-typed-items="RCB,
MI,
CSK,
DC,
PK,
KKR,
RR,
SRH"></span></h2>


    <div id="myOverlay" class="overlay">
      <span class="closebtn" onclick="closeSearch()" title="Close
Overlay">×</span>
      <div class="overlay-content">

            <!-----------------------------------------------hover screen-----
------------------------------------------------>
<form method="POST" action="{% url 'bastman' %}">
              {% csrf_token %}
            <!-- Dropdown -->
<input type="text" list="citylist" Placeholder="Search Player.."
name="playername" class="form-control" style="height: 50px">
    <datalist id="citylist">
 {% for lists in list %}
        <option value="{{lists}}">
 {% endfor %}
    </datalist>
   <button type='submit' value='Seleted option' id='but_read'>Submit</button>
          </form>
<br>
<br>
<br>
<br>
<br>
<br>
```

```
            <form method="POST" action="{% url 'team' %}">
              {% csrf_token %}
            <!-- Dropdown -->
<input type="text" list="citylist2" Placeholder="Search Team.."
name="teamname" class="form-control" style="height: 50px">
            <button type='submit' value='Seleted option'
id='but_read2'>Submit</button>

    <datalist id="citylist2">
 {% for lists2 in list2 %}
        <option value="{{lists2}}">
 {% endfor %}
    </datalist>


          </form>
         <br>
<br>
<br>



  <!-----------------------------------------------hover screen end-----------
----------------------------------------->

      </div>
    </div>
    </div>
      </div>


    </div>

    <svg class="hero-waves" xmlns="http://www.w3.org/2000/svg"
xmlns:xlink="http://www.w3.org/1999/xlink" viewBox="0 24 150 28 "
preserveAspectRatio="none">
      <defs>
        <path id="wave-path" d="M-160 44c30 0 58-18 88-18s 58 18 88 18 58-18
88-18 58 18 88 18 v44h-352z"></path>
      </defs>
      <g class="wave1">
        <use xlink:href="#wave-path" x="50" y="3" fill="rgba(255,255,255,
.1)"></use>
      </g>
      <g class="wave2">
        <use xlink:href="#wave-path" x="50" y="0" fill="rgba(255,255,255,
.2)"></use>
         </g>
      <g class="wave3">
        <use xlink:href="#wave-path" x="50" y="9" fill="#fff"></use>
      </g>
    </svg>

  </section><!-- End Hero -->

  <main id="main">
```

```
    <!-- ======= About Section ======= -->


    <!-- ======= Features Section ======= -->
    <section id="features" class="features">

    </section><!-- End Contact Section -->

  </main><!-- End #main -->

  <!-- ======= Footer ======= -->
  <footer id="footer">
    <div class="container">
      <h3>CrickeT AnalysiS</h3>
      <p>Et aut eum quis fuga eos sunt ipsa nihil. Labore corporis magni
eligendi fuga maxime saepe commodi placeat.</p>
      <div class="social-links">
        <a href="#" class="twitter"><i class="bx bxl-twitter"></i></a>
        <a href="#" class="facebook"><i class="bx bxl-facebook"></i></a>
        <a href="#" class="instagram"><i class="bx bxl-instagram"></i></a>
        <a href="#" class="google-plus"><i class="bx bxl-skype"></i></a>
        <a href="#" class="linkedin"><i class="bx bxl-linkedin"></i></a>
      </div>

    </div>
  </footer><!-- End Footer------------- -->

<!--------------------------------------------------------------------------
--------------------------------------------------------------------------
--------------------------------------------------------------------->

  <a href="#" class="back-to-top d-flex align-items-center justify-content-
center"><i class="bi bi-arrow-up-short"></i></a>

  <!-- Vendor JS Files ----------------->
  <script src="asset/vendor/aos/aos.js"></script>
  <script src="asset/vendor/bootstrap/js/bootstrap.bundle.min.js"></script>
  <script src="asset/vendor/glightbox/js/glightbox.min.js"></script>
  <script src="asset/vendor/isotope-layout/isotope.pkgd.min.js"></script>
  <script src="asset/vendor/php-email-form/validate.js"></script>
  <script src="asset/vendor/swiper/swiper-bundle.min.js"></script>
 <script src="asset/vendor/typed.js/typed.js"></script>
 <script src="asset/vendor/typed.js/typed.min.js.map"></script>
 <script src="asset/vendor/typed.js/typed.min.js"></script>


  <!-- Template Main JS File -->
  <script src="asset/js/main.js"></script>
  <script src="asset/js/bar.js"></script>

</body>

</html>
```

Batsman.html

```
<!DOCTYPE html>
<html lang="en">

<head>
  <meta charset="utf-8" />
  <link rel="apple-touch-icon" sizes="76x76" href="../asset/img/apple-
icon.png">
  <link rel="icon" type="image/png" href="../asset/img/favicon.png">
  <meta http-equiv="X-UA-Compatible" content="IE=edge,chrome=1" />
  <title>
    Players
  </title>
  <meta content='width=device-width, initial-scale=1.0, shrink-to-fit=no'
name='viewport' />
  <!--     Fonts and icons     -->
  <link rel="stylesheet" type="text/css"
href="https://fonts.googleapis.com/css?family=Roboto:300,400,500,700|Roboto+S
lab:400,700|Material+Icons" />
  <link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/font-
awesome/latest/css/font-awesome.min.css">
  <!-- CSS Files -->
  <link href="../asset/css/material-dashboard.css?v=2.1.2" rel="stylesheet"
/>
  <!-- CSS Just for demo purpose, don't include it in your project -->
  <link href="../asset/demo/demo.css" rel="stylesheet" />
</head>

<body class="">
  <div class="wrapper ">
    <div class="sidebar" data-color="orange" data-background-color="white"
data-image="../asset/img/side1.jpg" >
      <div class="logo"><a href="" class="simple-text logo-normal">
          Cricket Analysis
        </a></div>
      <div class="sidebar-wrapper">
        <ul class="nav">
          <li class="nav-item active  ">
            <a class="nav-link" href="">
              <i class="material-icons">dashboard</i>
              <p>Dashboard</p>
            </a>
          </li>

            <li class="nav-item ">
            <a class="nav-link" href="index.html">
              <i class="material-icons">bubble_chart</i>
              <p>Home</p>
            </a>
          </li>

          <li class="nav-item ">
            <a class="nav-link" href="aboutus.html">
              <i class="material-icons">person</i>
              <p>About Us</p>
            </a>
          </li>
```

```
          <li class="nav-item  ">
            <a class="nav-link" href="analysis.html">
              <i class="material-icons">content_paste</i>
              <p>Analysis</p>
            </a>
          </li>
        </ul>
      </div>
    </div>
    <div class="main-panel" style="background-image:
url('../asset/img/cricket.jpg');">
      <!-- Navbar -->
      <nav class="navbar navbar-expand-lg navbar-transparent navbar-absolute
fixed-top ">
        <div class="container-fluid">
          <div class="navbar-wrapper">
            <a class="navbar-brand" href="javascript:;">Dashboard</a>
          </div>
          <button class="navbar-toggler" type="button" data-toggle="collapse"
aria-controls="navigation-index" aria-expanded="false" aria-label="Toggle
navigation">
            <span class="sr-only">Toggle navigation</span>
            <span class="navbar-toggler-icon icon-bar"></span>
            <span class="navbar-toggler-icon icon-bar"></span>
            <span class="navbar-toggler-icon icon-bar"></span>
          </button>
        </div>
      </nav>
      <!-- End Navbar -->

      <!-- main page -------------->
      <div class="content">
        <div class="container-fluid" align="center">
            <h1 align="center">Player Analysis for {{name|safe}}</h1>
          <div class="row" style="width : 800px" align="middle">

           <!-- ============================  Dismissal types of {{name}}
======================== -->
             <div class="card card-stats">
               <div class="card-header card-header-info card-header-icon">
                 <div class="card-icon">
                <a>Dismissal types of {{name}}</a>
                 </div>
              <br>
              <br>
              <br>
              <br>
    <script type="text/javascript"
src="https://www.gstatic.com/charts/loader.js"></script>
    <script type="text/javascript">
      google.charts.load("current", {packages:["corechart"]});
      google.charts.setOnLoadCallback(drawChart);
      function drawChart() {
        var data = google.visualization.arrayToDataTable({{diskind|safe}});

        var options = {
```

```
          title: 'Dismissal Kind',
          is3D: true,
          pieSliceText: 'value',
        };

        var chart = new
google.visualization.PieChart(document.getElementById('piechart_3d'));
        chart.draw(data, options);
      }
    </script>
  <body>
    <div id="piechart_3d" style="width: 750px; height: 400px;"></div>
  </body>



                </div>
                <div class="card-footer">
                  <div class="stats">

                    <a href="javascript:;">{{name}}</a>
                  </div>
                </div>
              </div>

            <!-- ============================  Dismissal types of {{name}}
end========================= -->

           <!-- ============================  Scoring Run Types of
{{name}}======================== -->



              <div class="card card-stats">
                <div class="card-header card-header-danger card-header-icon">

                  <div class="card-icon">
                    <a>Scoring Run Types of {{name}}</a>
                  </div>
                <br>
                <br>
                <br>
                <br>

    <script type="text/javascript"
src="https://www.gstatic.com/charts/loader.js"></script>
    <script type="text/javascript">
      google.charts.load("current", {packages:["corechart"]});
      google.charts.setOnLoadCallback(drawChart);
      function drawChart() {
        var data = google.visualization.arrayToDataTable({{runscont|safe}});

        var options = {
          title: 'Scoring Run Types',
          pieHole: 0.4,
          pieSliceText: 'value',
        };
```

```
        var chart = new
google.visualization.PieChart(document.getElementById('donutchart'));
        chart.draw(data, options);
      }
    </script>
  <body>
    <div id="donutchart"  style="width: 750px; height: 400px;"></div>
  </body>
                </div>
                <div class="card-footer">
                  <div class="stats">
                      {{name}}
                  </div>
                </div>
              </div>

         <!-- ============================  Scoring Run Types of {{name}}
end========================= -->

<!-- ============================ Runs Scored by {{name|safe}} against all
Teams  ========================= -->
    <div class="card card-stats">
                <div class="card-header card-header-success card-header-
icon">
                  <div class="card-icon">
                    <a>Runs Scored by {{name|safe}} against all Teams</a>
                  </div>

                <br>
                <br>
                <br>
                <br>

   <script type="text/javascript"
src="https://www.gstatic.com/charts/loader.js"></script>
    <script type="text/javascript">
      google.charts.load('current', {'packages':['bar']});
      google.charts.setOnLoadCallback(drawStuff);

      function drawStuff() {
        var data = new
google.visualization.arrayToDataTable({{runs_vs_teams|safe}});

        var options = {
          width: 500,
          legend: { position: 'none' },
          chart: {

            },
          axes: {
            x: {
              0: { side: 'top', label: 'White to move'} // Top x-axis.
            }
          },
          bar: { groupWidth: "70%" }
        };
```

```
        var chart = new
google.charts.Bar(document.getElementById('top_x_div2'));
        // Convert the Classic options to Material options.
        chart.draw(data, google.charts.Bar.convertOptions(options));
      };
    </script>

   <body>
    <div id="top_x_div2" style="width: 800px; height: 600px;"></div>
  </body>
                </div>
                <div class="card-footer">
                  <div class="stats">
                      {{name}}
                  </div>
                </div>
              </div>

           <!-- ============================== Runs Scored by {{name|safe}}
against all Teams end ========================== -->

           <!-- ==============================Wickets Taken by {{name|safe}}
against all Teams ========================== -->


   <div class="card card-stats">
                <div class="card-header card-header-info card-header-icon">
                  <div class="card-icon">
                    <a>Wickets Taken by {{name|safe}} against all Teams</a>
                  </div>
               <br>
               <br>
               <br>
               <br>

   <script type="text/javascript"
src="https://www.gstatic.com/charts/loader.js"></script>
    <script type="text/javascript">
      google.charts.load('current', {'packages':['bar']});
      google.charts.setOnLoadCallback(drawStuff);

      function drawStuff() {
        var data = new
google.visualization.arrayToDataTable({{wickets_taken_vs_teams|safe}});

        var options = {
          width: 500,
          legend: { position: 'none' },
          chart: {

            },
          axes: {
            x: {
              0: { side: 'top', label: 'White to move'} // Top x-axis.
            }
          },
```

```
          bar: { groupWidth: "70%" }
        };

        var chart = new
google.charts.Bar(document.getElementById('top_x_div3'));
        // Convert the Classic options to Material options.
        chart.draw(data, google.charts.Bar.convertOptions(options));
      };
    </script>

   <body>
    <div id="top_x_div3" style="width: 800px; height: 600px;"></div>
  </body>

                </div>
                <div class="card-footer">
                  <div class="stats">
                      {{name}}
                  </div>
                </div>
              </div>


           <!-- ============================Wickets Taken by {{name|safe}}
against all Teams end ======================== -->
         </div>
             <!-- ============================Most Wicket Taken Of While
Bowling========================== -->

          <div class="row">
              <!-- ==============table ========== -->
            <div class="col-lg-6 col-md-12">
              <div class="card">
                <div class="card-header card-header-warning">
                  <h4 class="card-title">Most Wicket Taken Of While
Bowling</h4>

                </div>
                <div class="card-body table-responsive">

<script type="text/javascript" src="http://www.google.com/jsapi"></script>
<script type="text/javascript">
google.load('visualization', '1', {packages: ['table']});
</script>
<script type="text/javascript">
function drawVisualization() {
var data = new google.visualization.DataTable();
data.addColumn('string', 'Name');
data.addColumn('number', 'Place');
data.addRows({{most_wicket_taken|safe}});
visualization = new
google.visualization.Table(document.getElementById('table2'));
var StyleRows = {tableRow: 'StyleRows'} ;
visualization.draw(data,{title: 'Density of Precious Metals',showRowNumber:
true,alternatingRowStyle: false,allowHtml: true,height : 300,width:
500,cssClassNames: StyleRows});
}
```

```
google.setOnLoadCallback(drawVisualization);
</script>
<body>
<div id="table2"></div>
</body>

                </div>
              </div>
            </div>

           <!-- ============================Most Wicket Taken Of While
Bowling end========================== -->

           <!-- ============================Most Wicket taken by bowlers of
{{name}}========================== -->

           <div class="col-lg-6 col-md-12">
              <div class="card">
                <div class="card-header card-header-warning">
                  <h4 class="card-title">Most Wicket taken by bowlers of
{{name}}</h4>

                </div>
                <div class="card-body table-responsive">

<script type="text/javascript">
google.load('visualization', '1', {packages: ['table']});
</script>
<script type="text/javascript">
function drawVisualization() {
var data = new google.visualization.DataTable();
data.addColumn('string', 'Name');
data.addColumn('number', 'Place');
data.addRows({{most_wic|safe}});
visualization = new
google.visualization.Table(document.getElementById('table'));
var StyleRows = {tableRow: 'StyleRows'} ;
visualization.draw(data,{showRowNumber: true,alternatingRowStyle:
false,allowHtml: true,height : 300,width: 500,cssClassNames: StyleRows});
}
google.setOnLoadCallback(drawVisualization);
</script>
<body>
<div id="table"></div>
</body>

                </div>
              </div>
            </div>

           <!-- ============================Most Wicket taken by bowlers of
{{name}}end ========================== -->

            <!-- ============table end =========== -->
          </div>
        </div>
      </div>
```

```
      <footer class="footer">
        <div class="container-fluid">



        </div>
      </footer>
    </div>
   </div>
  <!--   Core JS Files   ----------------->
  <script src="../asset/js/core/jquery.min.js"></script>
  <script src="../asset/js/core/popper.min.js"></script>
  <script src="../asset/js/core/bootstrap-material-design.min.js"></script>
  <script src="../asset/js/plugins/perfect-scrollbar.jquery.min.js"></script>
  <script src="../asset/js/plugins/moment.min.js"></script>
  <script src="../asset/js/plugins/sweetalert2.js"></script>
  <script src="../asset/js/plugins/jquery.validate.min.js"></script>
  <script src="../asset/js/plugins/jquery.bootstrap-wizard.js"></script>
  <script src="../asset/js/plugins/bootstrap-selectpicker.js"></script>
  <script src="../asset/js/plugins/bootstrap-datetimepicker.min.js"></script>
  <script src="../asset/js/plugins/jquery.dataTables.min.js"></script>
  <script src="../asset/js/plugins/bootstrap-tagsinput.js"></script>
  <script src="../asset/js/plugins/jasny-bootstrap.min.js"></script>
  <script src="../asset/js/plugins/fullcalendar.min.js"></script>
  <script src="../asset/js/plugins/jquery-jvectormap.js"></script>
  <script src="../asset/js/plugins/nouislider.min.js"></script>
  <script src="https://cdnjs.cloudflare.com/ajax/libs/core-
js/2.4.1/core.js"></script>
  <script src="../asset/js/plugins/arrive.min.js"></script>
  <script
src="https://maps.googleapis.com/maps/api/js?key=YOUR_KEY_HERE"></script>
  <script src="../asset/js/plugins/chartist.min.js"></script>
  <script src="../asset/js/plugins/bootstrap-notify.js"></script>
  <script src="../asset/js/material-dashboard.js?v=2.1.2"
type="text/javascript"></script>
  <script src="../asset/demo/demo.js"></script>

</body>

</html>
```

Analysis.html

```
<!DOCTYPE html>
<html lang="en">

<head>

    <style type="text/css">
.StyleRows {
background-color: #FFFFFF;
color: #3366CC;
font: 13px Verdana;
font-weight: bold;
```

```
text-align: center; }
</style>


  <meta charset="utf-8" />
  <link rel="apple-touch-icon" sizes="76x76" href="../asset/img/apple-
icon.png">
  <link rel="icon" type="image/png" href="../asset/img/favicon.png">
  <meta http-equiv="X-UA-Compatible" content="IE=edge,chrome=1" />
  <title>
    Analyze
  </title>
  <meta content='width=device-width, initial-scale=1.0, shrink-to-fit=no'
name='viewport' />
  <!--     Fonts and icons     -->
  <link rel="stylesheet" type="text/css"
href="https://fonts.googleapis.com/css?family=Roboto:300,400,500,700|Roboto+S
lab:400,700|Material+Icons" />
  <link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/font-
awesome/latest/css/font-awesome.min.css">
  <!-- CSS Files -->
  <link href="../asset/css/material-dashboard.css?v=2.1.2" rel="stylesheet"
/>
  <!-- CSS Just for demo purpose, don't include it in your project -->
  <link href="../asset/demo/demo.css" rel="stylesheet" />
</head>

<body class="">
  <div class="wrapper ">
    <div class="sidebar" data-color="purple" data-background-color="white"
data-image="../asset/img/side1.jpg">
      <div class="logo"><a href="" class="simple-text logo-normal">
          Cricket Analysis
        </a></div>
      <div class="sidebar-wrapper">
        <ul class="nav">
          <li class="nav-item active  ">
            <a class="nav-link" href="">
              <i class="material-icons">content_paste</i>
              <p>Analyze</p>
            </a>
          </li>

            <li class="nav-item ">
            <a class="nav-link" href="index.html">
              <i class="material-icons">bubble_chart</i>
              <p>Home</p>
            </a>
          </li>

          <li class="nav-item ">
            <a class="nav-link" href="aboutus.html">
              <i class="material-icons">person</i>
              <p>About Us</p>
            </a>
          </li>
```

```
        </ul>
      </div>
    </div>
    <div class="main-panel">
      <!-- Navbar -->
      <nav class="navbar navbar-expand-lg navbar-transparent navbar-absolute
fixed-top ">
        <div class="container-fluid">
          <div class="navbar-wrapper">
            <a class="navbar-brand" href="javascript:;">Analyze</a>
          </div>
          <button class="navbar-toggler" type="button" data-toggle="collapse"
aria-controls="navigation-index" aria-expanded="false" aria-label="Toggle
navigation">
            <span class="sr-only">Toggle navigation</span>
            <span class="navbar-toggler-icon icon-bar"></span>
            <span class="navbar-toggler-icon icon-bar"></span>
            <span class="navbar-toggler-icon icon-bar"></span>
          </button>
        </div>
      </nav>
      <!-- End Navbar -->

      <!-- main page
============================================================================
========================================== -------------->
      <!-- main page
============================================================================
========================================== -------------->
      <!-- main page
============================================================================
========================================== -------------->
      <!-- main page
============================================================================
========================================== -------------->
      <!-- main page
============================================================================
========================================== -------------->
      <div class="content">
        <div class="container-fluid" align="center">
            <h1 align="center">IPL Total Analysis</h1>
          <div class="row" style="width : 900px" align="middle">

            <!-- ============================== bar 1=========================
-->
              <div class="card card-stats">
                <div class="card-header card-header-info card-header-icon">
                  <div class="card-icon">
                 <a>Maximum Run in IPL League</a>
                  </div>
                <br>
                <br>
                <br>
                <br>

    <script type="text/javascript"
src="https://www.gstatic.com/charts/loader.js"></script>
```

```
    <script type="text/javascript">
      google.charts.load('current', {'packages':['corechart']});
      google.charts.setOnLoadCallback(drawChart);

      function drawChart() {

        var data = google.visualization.arrayToDataTable({{maxruns|safe}});

        var options = {
          pieSliceText: 'value',
        };

        var chart = new
google.visualization.PieChart(document.getElementById('piechart'));

        chart.draw(data, options);
      }
    </script>
  </head>
  <body>
    <div id="piechart" style="width: 900px; height: 500px;"></div>
  </body>


                </div>
                <div class="card-footer">
                  <div class="stats">

                    <a href="javascript:;"></a>
                  </div>
                </div>
              </div>

             <!-- ============================  bar1
======================== -->


<!-- ============================ bar 1======================== -->
              <div class="card card-stats">
                <div class="card-header card-header-info card-header-icon">
                  <div class="card-icon">
                <a>Maximum Wickets in IPL League</a>-->
                  </div>
               <br>
               <br>
               <br>
               <br>

       <script type="text/javascript"
src="https://www.gstatic.com/charts/loader.js"></script>
    <script type="text/javascript">
      google.charts.load('current', {'packages':['bar']});
      google.charts.setOnLoadCallback(drawStuff);

      function drawStuff() {
        var data = new
google.visualization.arrayToDataTable({{highestwicket|safe}});
```

```
        var options = {
          width: 800,
          legend: { position: 'none' },
          bar: { groupWidth: "90%" }
        };

        var chart = new
google.charts.Bar(document.getElementById('top_x_div2'));
        // Convert the Classic options to Material options.
        chart.draw(data, google.charts.Bar.convertOptions(options));
      };
    </script>
  </head>
  <body>
    <div id="top_x_div2" style="width: 800px; height: 600px;"></div>
  </body>



                </div>
                <div class="card-footer">
                  <div class="stats">

                    <a href="javascript:;"></a>
                  </div>
                </div>
              </div>

             <!-- ============================  bar1
======================== -->




              <!-- ============================= bar
1========================= -->
              <div class="card card-stats">
                <div class="card-header card-header-info card-header-icon">
                  <div class="card-icon">
               <a>Maximum Toss Won</a>-->
                  </div>
                <br>
                <br>
                <br>
                <br>

        <script type="text/javascript"
src="https://www.gstatic.com/charts/loader.js"></script>
    <script type="text/javascript">
      google.charts.load('current', {'packages':['corechart']});
      google.charts.setOnLoadCallback(drawVisualization);

      function drawVisualization() {
        // Some raw data (not necessarily accurate)
        var data = google.visualization.arrayToDataTable({{toss_win|safe}});
```

```
        var options = {
          vAxis: {title: 'Toss Won'},
          hAxis: {title: 'Team Name'},
          seriesType: 'bars',
          series: {1: {type: 'line'}}
        };

        var chart = new
google.visualization.ComboChart(document.getElementById('chart_div'));
        chart.draw(data, options);
      }
    </script>
  </head>
  <body>
    <div id="chart_div" style="width: 900px; height: 500px;"></div>
  </body>


                </div>
                <div class="card-footer">
                  <div class="stats">

                    <a href="javascript:;"></a>
                  </div>
                </div>
              </div>

             <!-- ============================== bar1
======================== -->




              <!-- ============================== bar
1========================= -->
              <div class="card card-stats">
                <div class="card-header card-header-info card-header-icon">
                  <div class="card-icon">
                  <a>Winning Percentage in IPL</a>-->
                  </div>
                <br>
                <br>
                <br>
                <br>

       <script type="text/javascript"
src="https://www.gstatic.com/charts/loader.js"></script>
    <script type="text/javascript">
      google.charts.load('current', {'packages':['bar']});
      google.charts.setOnLoadCallback(drawStuff);

      function drawStuff() {
        var data = new
google.visualization.arrayToDataTable({{most_wins|safe}});

        var options = {
          width: 800,
```

```
          legend: { position: 'none' },
            bars: 'horizontal',
            colors:['red','#004411'],
                      axes: {
            x: {
              0: { side: 'top'} // Top x-axis.
            }
          },
          bar: { groupWidth: "90%" }
        };

        var chart = new
google.charts.Bar(document.getElementById('top_x_div5'));
        // Convert the Classic options to Material options.
        chart.draw(data, google.charts.Bar.convertOptions(options));
      };
    </script>
  </head>
  <body>
    <div id="top_x_div5" style="width: 800px; height: 600px;"></div>
  </body>

                </div>
                <div class="card-footer">
                  <div class="stats">

                    <a href="javascript:;"></a>
                  </div>
                </div>
              </div>

             <!-- ============================  bar1
======================== -->




              <!-- ============================= bar
1======================== -->
              <div class="card card-stats">
                <div class="card-header card-header-info card-header-icon">
                  <div class="card-icon">
                <a>Runs Distribution Scored in Inning by All Teams</a>-->
                  </div>
                    <div align="center">
                        <img src="asset/box.png" align="center">
                    </div>


                </div>
                <div class="card-footer">
                  <div class="stats">

                    <a href="javascript:;"></a>
                  </div>
                </div>
              </div>
```

```
            <!-- ============================  bar1
======================== -->



             <!-- ============================ bar
1========================= -->
             <div class="card card-stats">
               <div class="card-header card-header-info card-header-icon">
                 <div class="card-icon">
                     <a>Most Man of the Math in IPL League</a>
                 </div>
              <br>
              <br>
              <br>
              <br>

  <script type="text/javascript" src="http://www.google.com/jsapi"></script>
<script type="text/javascript">
google.load('visualization', '1', {packages: ['table']});
</script>
<script type="text/javascript">
function drawVisualization() {
var data = new google.visualization.DataTable();
data.addColumn('string', 'Name');
data.addColumn('number', 'Place');
data.addRows({{most_mom|safe}});
visualization = new
google.visualization.Table(document.getElementById('table'));
var StyleRows = {tableRow: 'StyleRows'} ;
visualization.draw(data,{showRowNumber: true,alternatingRowStyle:
false,allowHtml: true,height : 300,width: 500,cssClassNames: StyleRows});
}
google.setOnLoadCallback(drawVisualization);
</script>
</head>
<body>
<div id="table" align="center"></div>
</body>



               </div>
               <div class="card-footer">
                 <div class="stats">

                   <a href="javascript:;"></a>
                 </div>
               </div>
             </div>

            <!-- ============================  bar1
======================== -->
```

```
      <!-- main page
end=========================================================================
========================================== ------------->
      <!-- main page
end=========================================================================
========================================== ------------->
      <!-- main page
end=========================================================================
========================================== ------------->
      <!-- main page
end=========================================================================
========================================== ------------->

      <footer class="footer">
        <div class="container-fluid">



        </div>
      </footer>
    </div>
   </div>
  <!--   Core JS Files  ----------------->
  <script src="../asset/js/core/jquery.min.js"></script>
  <script src="../asset/js/core/popper.min.js"></script>
  <script src="../asset/js/core/bootstrap-material-design.min.js"></script>
  <script src="../asset/js/plugins/perfect-scrollbar.jquery.min.js"></script>
  <script src="../asset/js/plugins/moment.min.js"></script>
  <script src="../asset/js/plugins/sweetalert2.js"></script>
  <script src="../asset/js/plugins/jquery.validate.min.js"></script>
  <script src="../asset/js/plugins/jquery.bootstrap-wizard.js"></script>
  <script src="../asset/js/plugins/bootstrap-selectpicker.js"></script>
  <script src="../asset/js/plugins/bootstrap-datetimepicker.min.js"></script>
  <script src="../asset/js/plugins/jquery.dataTables.min.js"></script>
  <script src="../asset/js/plugins/bootstrap-tagsinput.js"></script>
  <script src="../asset/js/plugins/jasny-bootstrap.min.js"></script>
  <script src="../asset/js/plugins/fullcalendar.min.js"></script>
  <script src="../asset/js/plugins/jquery-jvectormap.js"></script>
  <script src="../asset/js/plugins/nouislider.min.js"></script>
  <script src="https://cdnjs.cloudflare.com/ajax/libs/core-
js/2.4.1/core.js"></script>
  <script src="../asset/js/plugins/arrive.min.js"></script>
  <script
src="https://maps.googleapis.com/maps/api/js?key=YOUR_KEY_HERE"></script>
  <script src="../asset/js/plugins/chartist.min.js"></script>
  <script src="../asset/js/plugins/bootstrap-notify.js"></script>
  <script src="../asset/js/material-dashboard.js?v=2.1.2"
type="text/javascript"></script>
  <script src="../asset/demo/demo.js"></script>

</body>

</html>
```

Aboutus.html

```
<!DOCTYPE html>
<html lang="en">

<head>
  <meta charset="utf-8">
  <meta content="width=device-width, initial-scale=1.0" name="viewport">

  <title>About Us</title>
  <meta content="" name="description">
  <meta content="" name="keywords">
  <meta property="og:title" content="">
  <meta property="og:image" content="">
  <meta property="og:url" content="">
  <meta property="og:site_name" content="">
  <meta property="og:description" content="">
  <meta name="twitter:card" content="summary">
  <meta name="twitter:site" content="">
  <meta name="twitter:title" content="">
  <meta name="twitter:description" content="">
  <meta name="twitter:image" content="">

  <!-- Google Fonts -->
  <link
href="https://fonts.googleapis.com/css?family=Open+Sans:300,300i,400,400i,700
,700i|Raleway:300,400,500,700,800" rel="stylesheet">

  <!-- Vendor CSS Files -->
  <link href="asset/vendor/aos/aos.css" rel="stylesheet">
  <link href="asset/vendor/bootstrap/css/bootstrap.min.css" rel="stylesheet">
  <link href="asset/vendor/bootstrap-icons/bootstrap-icons.css"
rel="stylesheet">
  <link href="asset/vendor/glightbox/css/glightbox.min.css" rel="stylesheet">
  <link href="asset/vendor/swiper/swiper-bundle.min.css" rel="stylesheet">

  <!-- Template Main CSS File -->
  <link href="asset/css/style.css" rel="stylesheet">

  <!--
==========================================================================
================================== -->
</head>

<body>

  <!-- ======= Header ======= -->
  <header id="header" class="d-flex align-items-center">
    <div class="container d-flex align-items-center justify-content-between">

      <a href="index.html" class="logo mr-auto"><h2>cricket analysis</h2></a>

      <nav id="navbar" class="navbar">
        <ul>
          <li><a class="nav-link scrollto " href="index.html">Home</a></li>
          <li><a class="nav-link scrollto "
href="analysis.html">Analyze</a></li>
          <li><a class="nav-link scrollto" href="#team">Team</a></li>
        </ul>
```

```
        <i class="bi bi-list mobile-nav-toggle"></i>
      </nav><!-- .navbar -->

    </div>
  </header><!-- End Header -->

  <main id="main">

    <!-- ======= Breadcrumbs ======= -->
    <section id="breadcrumbs" class="breadcrumbs">
      <div class="container">

        <div class="d-flex justify-content-between align-items-center">
          <h2>Project Details</h2>
          <ol>
            <li><a href="index.html">Home</a></li>
            <li>Project Details</li>
          </ol>
        </div>

      </div>
    </section><!-- End Breadcrumbs -->

    <!-- ======= Project Details Section ======= -->
    <section id="portfolio-details" class="portfolio-details">
      <div class="container">

        <div class="row gy-4">

          <div class="col-lg-8">
            <div class="portfolio-details-slider swiper-container">
              <div class="swiper-wrapper align-items-center">

                <div class="swiper-slide">
                  <img src="asset/img/ab1.jpg" alt="">
                </div>

                <div class="swiper-slide">
                  <img src="asset/img/ab2.jpg" alt="">
                </div>

              </div>
              <div class="swiper-pagination"></div>
            </div>
          </div>

          <div class="col-lg-4">
            <div class="portfolio-info">
              <h3>Project information</h3>
              <ul>
                <li><strong>Project Name </strong>: Cricket Analysis</li>
                <li><strong>Guided by</strong>: Prof. Edward Jeero</li>

              </ul>
            </div>
            <div class="portfolio-description">
              <h2>Discription </h2>
```

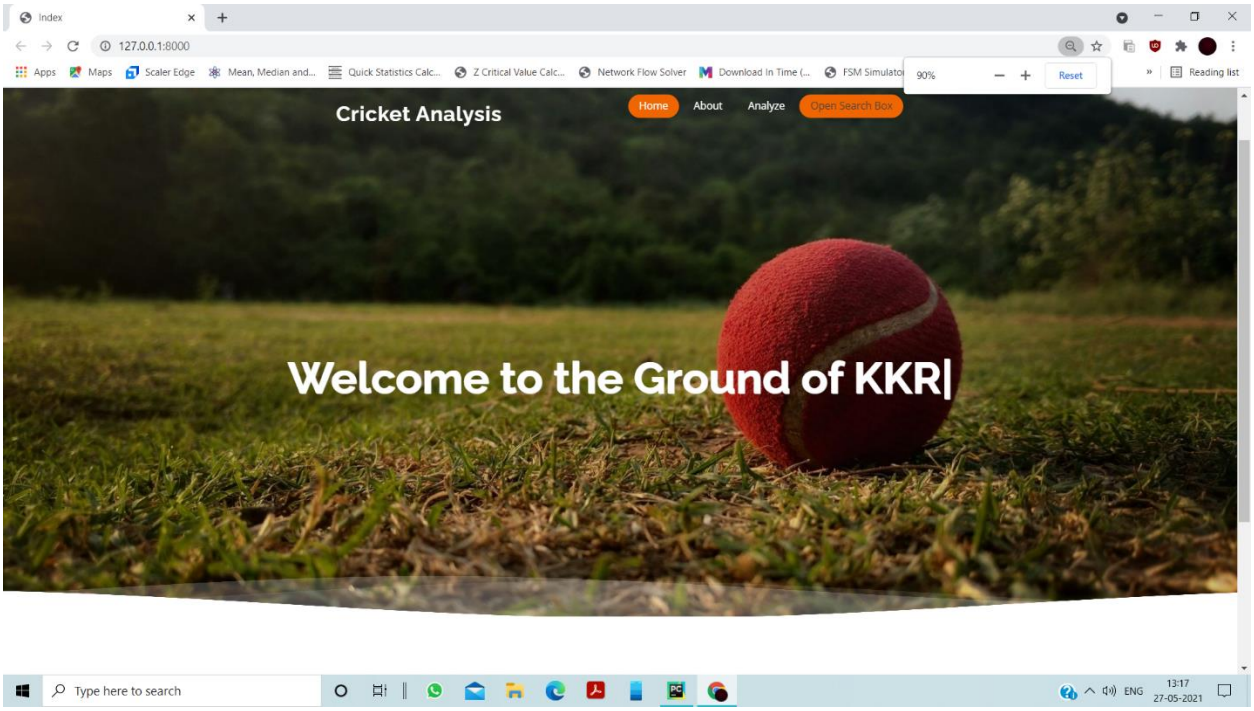
```
              <p>
                The Indian Premier league or fondly known as IPL stands to be
one of the flagship sports leagues of India with a huge fan following all
over the world. Using the concepts learnt in information visualization and
data analysis, our team has carefully analysed the strike rate, dismissal
kind, total number of runs made by the player and many such features
pertaining to the player of the team he belongs to. We have used html and
django to create a dashboard that is not only visually appealing but also
user friendly.
              </p>
            </div>
          </div>

        </div>

      </div>
    </section><!-- End Portfolio Details Section -->

  </main><!-- End #main -->
   <section id="team">
      <div class="container wow fadeInUp">
        <div class="row">
          <div class="col-md-12">
            <h3 class="section-title">Our Team</h3>
            <div class="section-title-divider"></div>
            <p class="section-description">"No one can whistle a symphony. It
takes a whole orchestra to play it."</p>
          </div>
        </div>

        <div class="row" >
          <div class="col-md-2">
            <div class="member">
              <div class="pic"><img src="asset/img/team/git.jpg"
alt=""></div>
              <h4>Gitansh Saharan</h4>
              <span>19MIA1060</span>
              <div class="social">
                <a href=""><i class="bi bi-twitter"></i></a>
                <a href=""><i class="bi bi-facebook"></i></a>
                <a href=""><i class="bi bi-instagram"></i></a>
                <a href=""><i class="bi bi-linkedin"></i></a>
              </div>
            </div>
          </div>
      <div class="col-md-2">
            <div class="member">
              <div class="pic"><img src="asset/img/team/shri.jpeg"
alt=""></div>
              <h4>B.N. Shrikriti</h4>
              <span>19MIA1037</span>
              <div class="social">
                <a href=""><i class="bi bi-twitter"></i></a>
                <a href=""><i class="bi bi-facebook"></i></a>
                <a href=""><i class="bi bi-instagram"></i></a>
                <a href=""><i class="bi bi-linkedin"></i></a>
              </div>
```

```
            </div>
          </div>

          <div class="col-md-2">
            <div class="member">
              <div class="pic"><img src="asset/img/team/mohit.jpeg"
alt=""></div>
              <h4>Mohit More</h4>
              <span>19MIA1005</span>
              <div class="social">
                <a href=""><i class="bi bi-twitter"></i></a>
                <a href=""><i class="bi bi-facebook"></i></a>
                <a href=""><i class="bi bi-instagram"></i></a>
                <a href=""><i class="bi bi-linkedin"></i></a>
              </div>
            </div>
          </div>

          <div class="col-md-2">
            <div class="member">
              <div class="pic"><img src="asset/img/team/sam.jpeg"
alt=""></div>
              <h4>H. Samyuktha</h4>
              <span>19MIA1080</span>
              <div class="social">
                <a href=""><i class="bi bi-twitter"></i></a>
                <a href=""><i class="bi bi-facebook"></i></a>
                <a href=""><i class="bi bi-instagram"></i></a>
                <a href=""><i class="bi bi-linkedin"></i></a>
              </div>
            </div>
          </div>

          <div class="col-md-2">
            <div class="member">
              <div class="pic"><img src="asset/img/team/team-4.jpeg"
alt=""></div>
              <h4>Sayantan Nandy</h4>
              <span>19MIA1049</span>
              <div class="social">
                <a href=""><i class="bi bi-twitter"></i></a>
                <a href=""><i class="bi bi-facebook"></i></a>
                <a href=""><i class="bi bi-instagram"></i></a>
                <a href=""><i class="bi bi-linkedin"></i></a>
              </div>
            </div>
          </div>

        </div>
      </div>
    </section><!-- End Team Section -->

  <!-- ======= Footer ======= -->
  <footer id="footer">
    <div class="container">
      <div class="row">
        <div class="col-md-12">
```

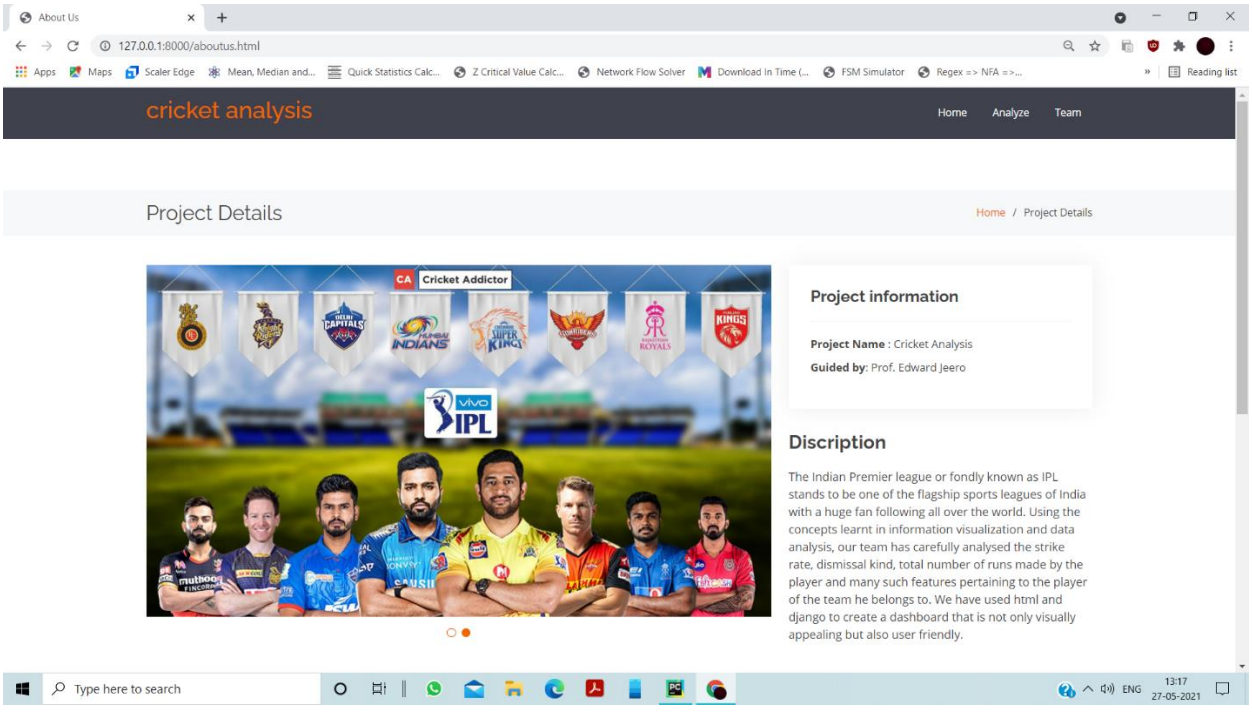
```
          <div class="copyright">
            &copy;<strong>cricket analysis</strong>
          </div>
          <div class="credits">

          </div>
        </div>
      </div>
    </div>
  </footer><!-- End Footer -->


   <!--
================================================================================
========================================== -->

  <div id="preloader"></div>
  <a href="#" class="back-to-top d-flex align-items-center justify-content-
center"><i class="bi bi-arrow-up-short"></i></a>

  <!-- Vendor JS Files -->
  <script src="asset/vendor/aos/aos.js"></script>
  <script src="asset/vendor/bootstrap/js/bootstrap.bundle.min.js"></script>
  <script src="asset/vendor/glightbox/js/glightbox.min.js"></script>
  <script src="asset/vendor/isotope-layout/isotope.pkgd.min.js"></script>
  <script src="asset/vendor/php-email-form/validate.js"></script>
  <script src="asset/vendor/swiper/swiper-bundle.min.js"></script>
  <script src="asset/vendor/typed.js/typed.min.js"></script>

  <!-- Template Main JS File -->
  <script src="asset/js/main.js"></script>

</body>

</html>
```

RESULTS:

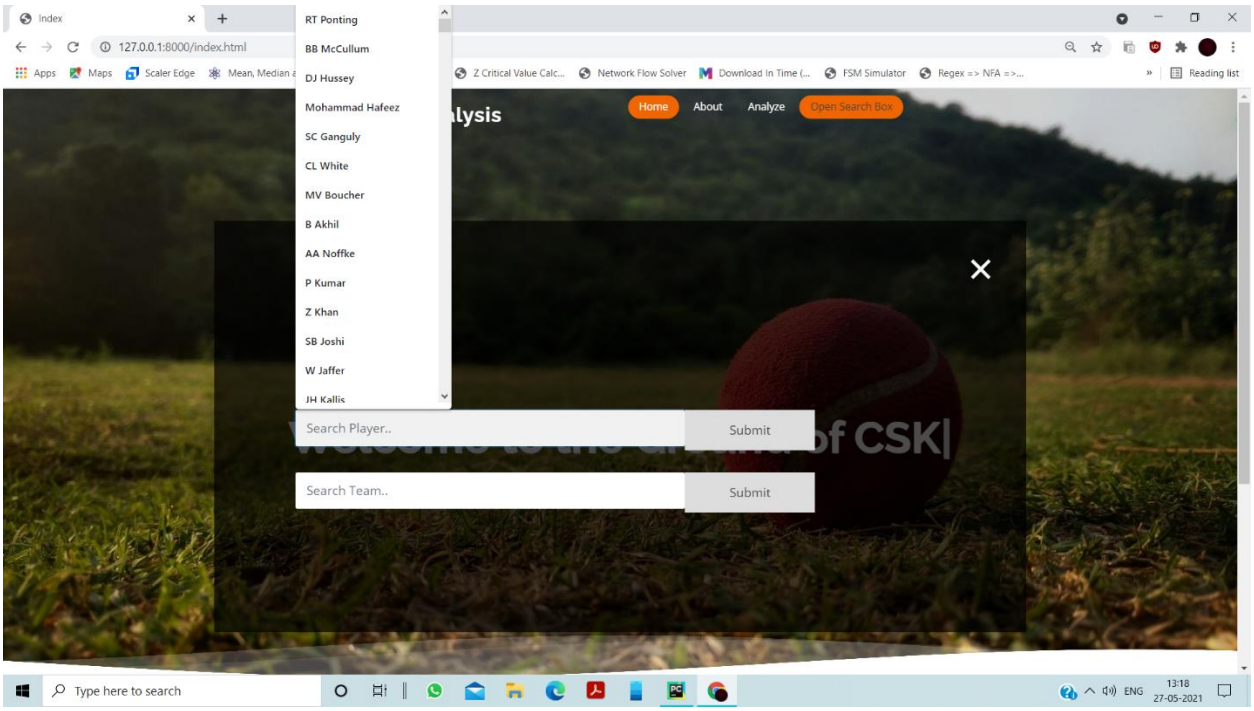
The home page of the dashboard:



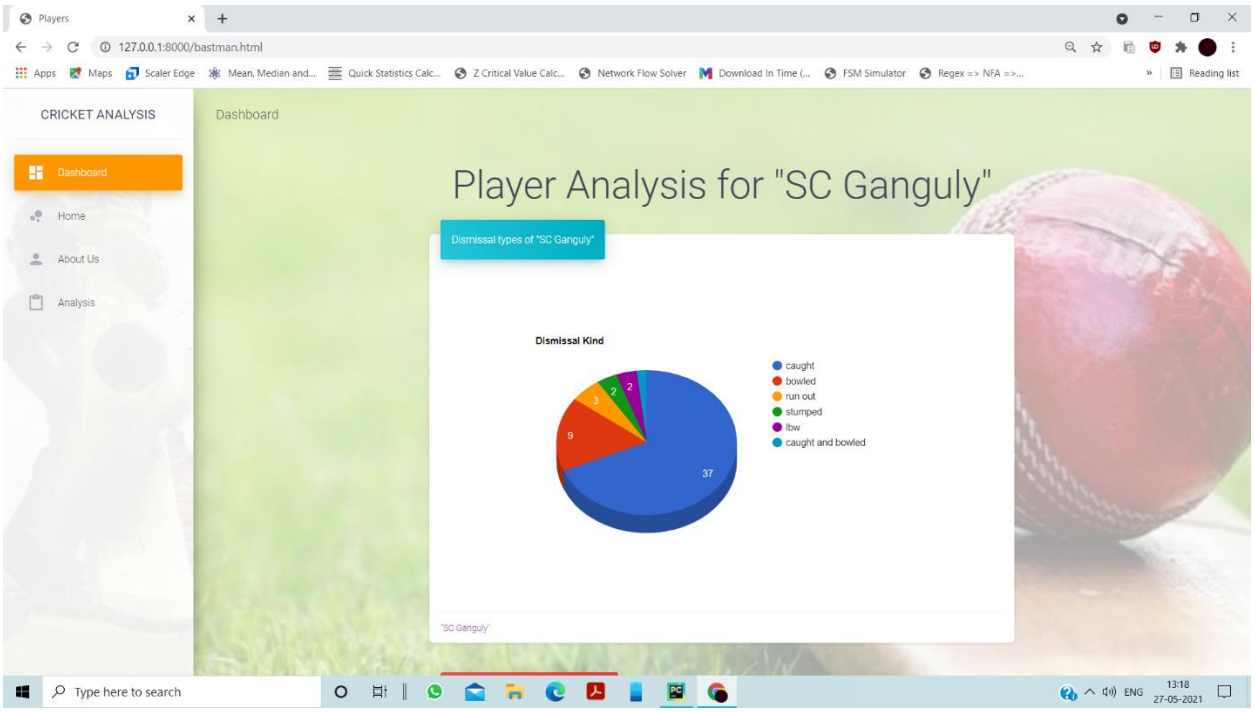
Project Details:



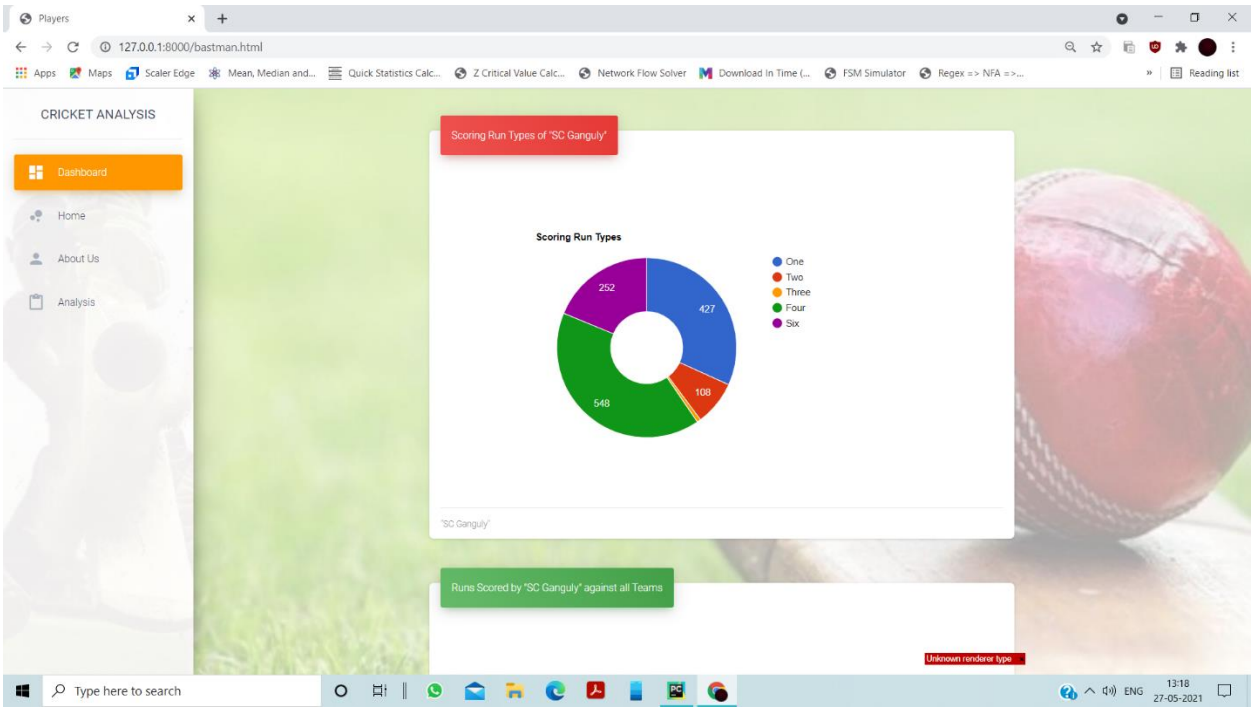
Upon searching about the player “SC Ganguly”



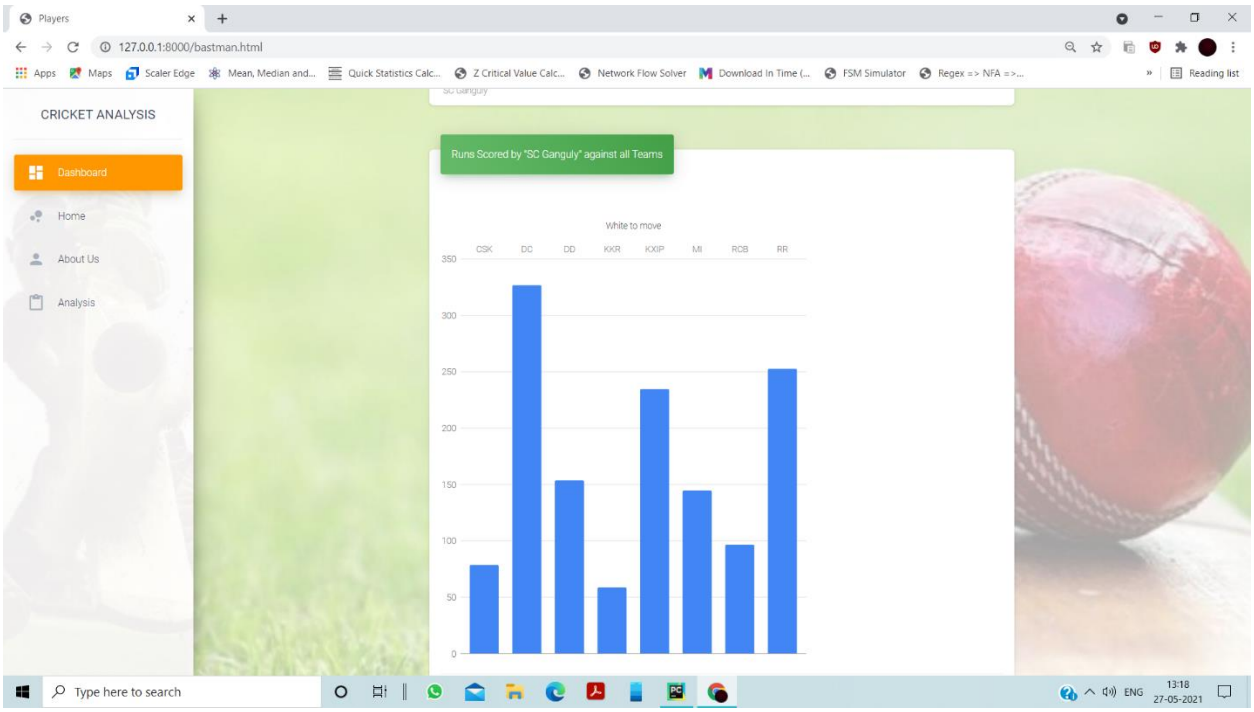
We can either select player, team or complete IPL analysis.



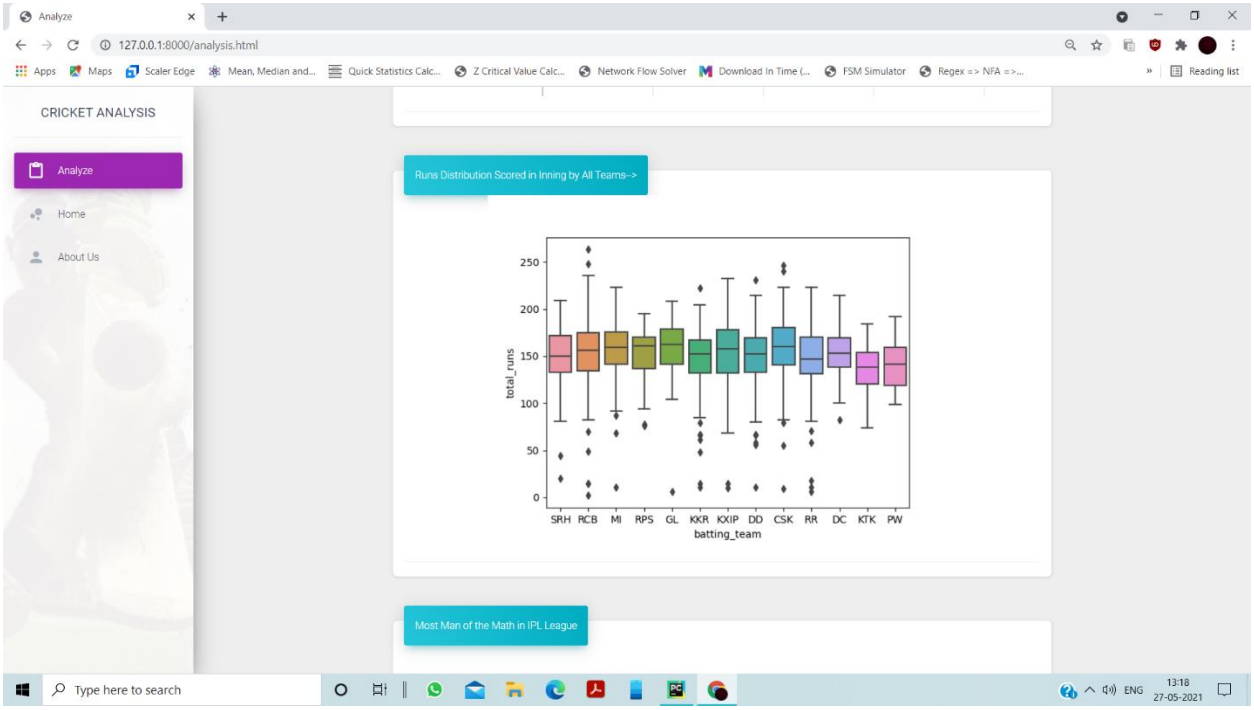
AS you can see most dismissal kind is 37 by catch out.



Most of the run scored by 4s and 2nd most is 1s.

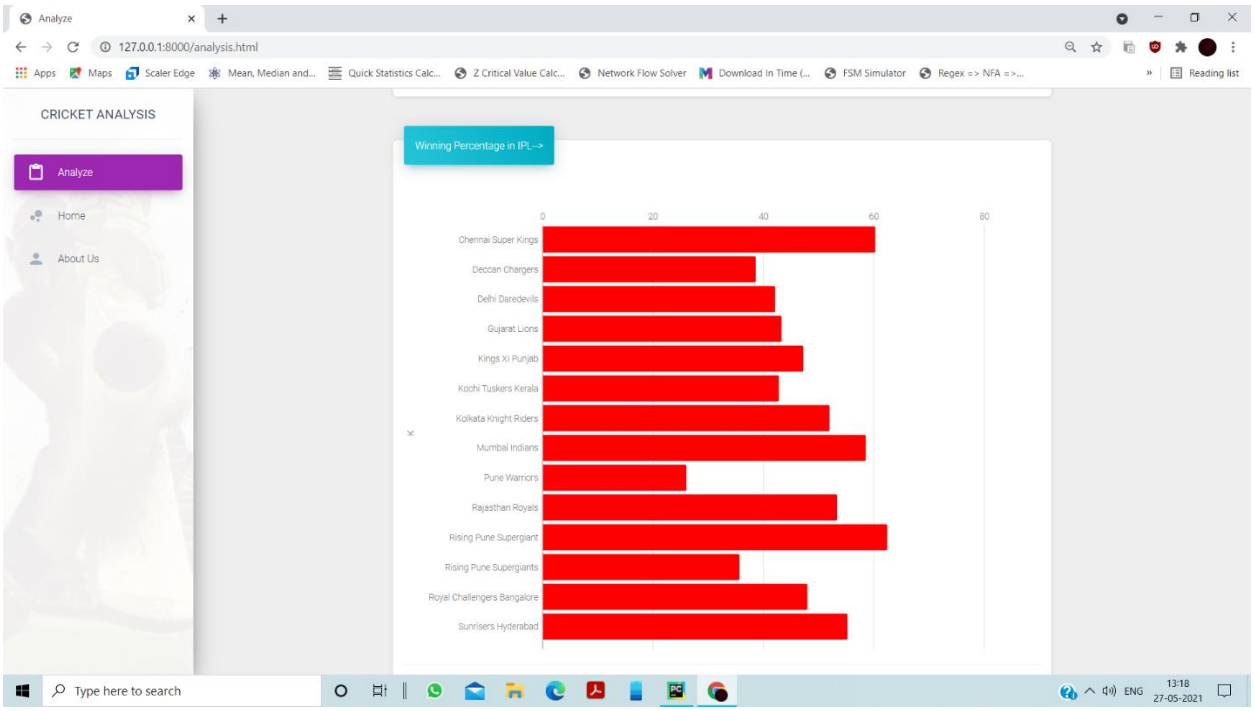


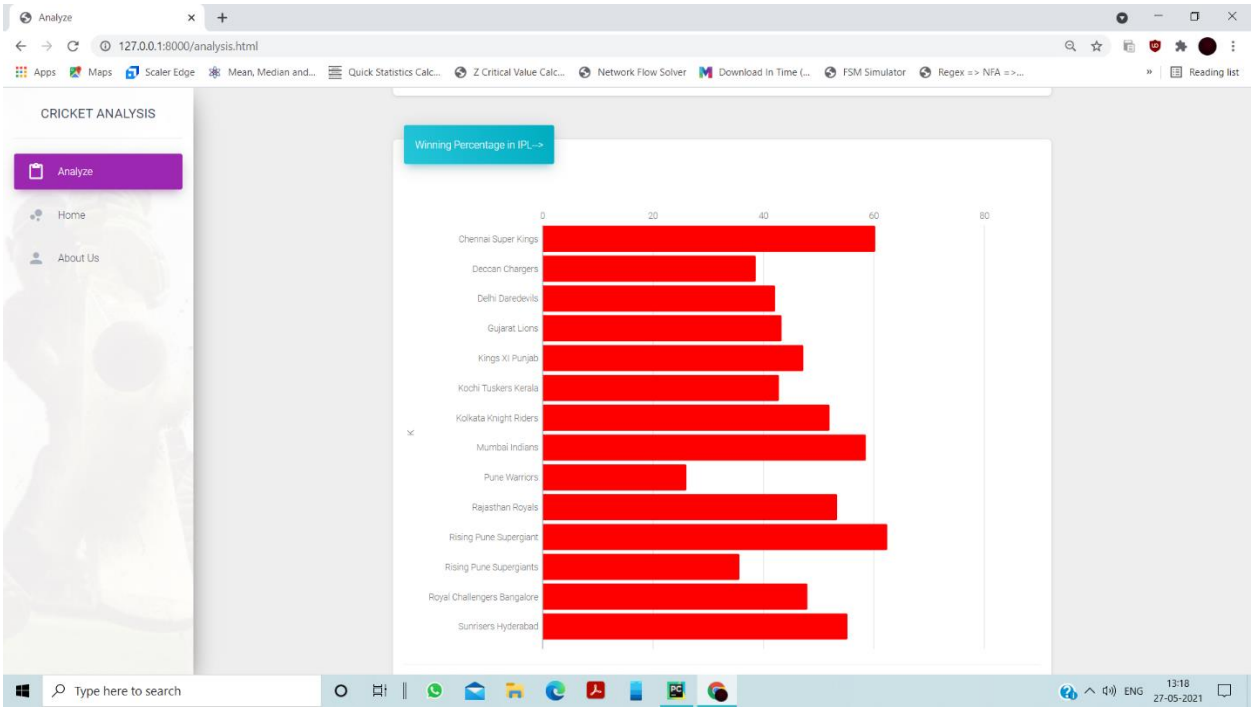
RUNS DISTRIBUTION SCORED IN INNINGS BY ALL TEAMS:



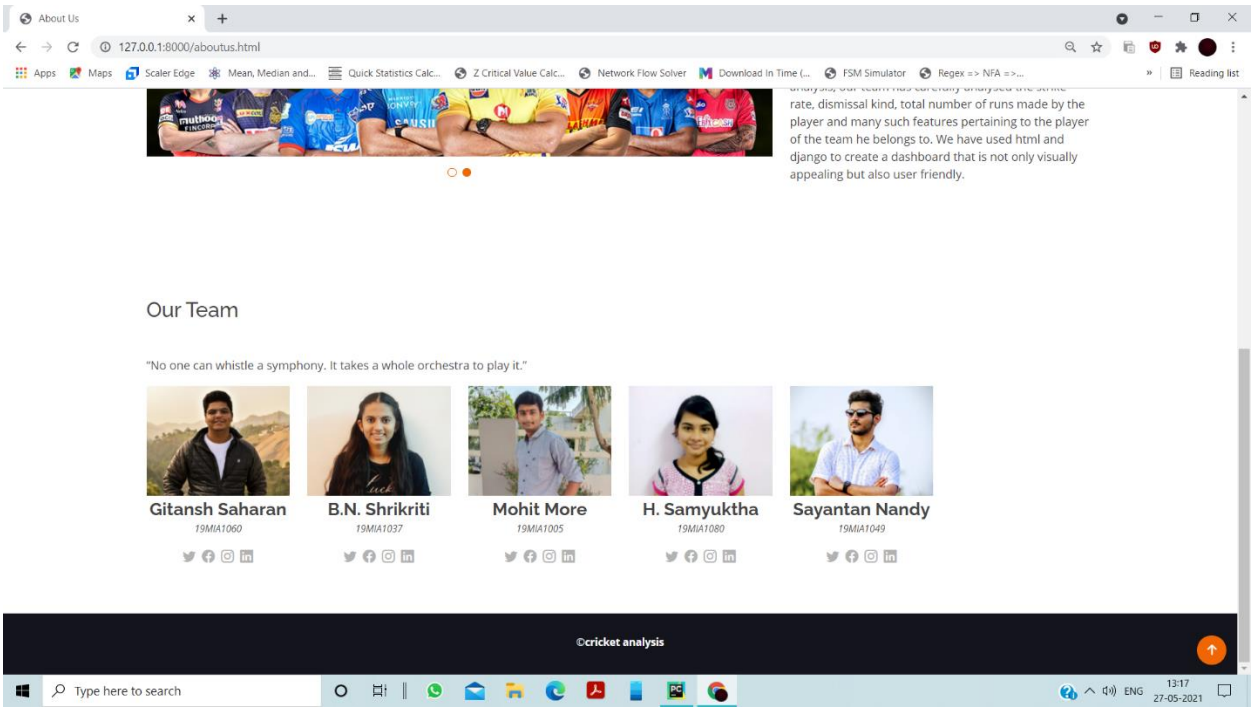
According to this plot, the batting by CSK & RCB seems best.

This figure also conveys the same story.in this, we see a point near 0 for RCB which may seem to be outlier. But it is on account of the match was disrupted.





SUBMITTED BY:



CONCLUSION:

The project has been implemented according to the understanding and requirements of information visualization using the necessary coding, and software and the output is displayed.

REFERENCES:

- Pedregosa, Fabian, et al. ”Scikit-learn: Machine learning in Python.” Journal of Machine Learning Research 12.Oct (2011): 2825-2830.
- Daniel Mago, Vistro Faizan Rasheed, Leo Gertrude Dacid, “The cricket Winner Prediction with application of machine learning and data analytics”, Volume: 8 Issue: 4(September 2019)
- Rabindra Lamsal and Ayesha Choudhary, “Predicting Outcome of Indian Premier League (IPL) Matches Using Machine Learning”, arXiv:1809.09813 [stat.AP] (September 2018)
- S. Muthuswamy and S. S. Lam, "Bowler Performance Prediction for One-day International Cricket Using Neural Networks," in Industrial Engineering Research Conference, 2008.
- Abhishek Naik, Shivanee Pawar, Minakshee Naik, Sahil Mulani, “Winning Prediction Analysis in One-Day-International (ODI) Cricket Using Machine Learning Techniques”, International Journal of Emerging Technology and Computer Science, Volume: 3 Issue: 2 (April 2018)

- Parker, D., Burns, P., & Natarajan, H. (2008, October). Player valuations in the Indian Premier League. Frontier Economics.
- Geddam Jaishankar Harshit, Rajkumar S, “A Review Paper on Cricket Predictions Using Various Machine Learning Algorithms and Comparisons among Them”, International Journal for Research in Applied Science & Engineering Technology (IJRASET), IJRASET17099 (April 2018)