



MANIPAL INSTITUTE OF TECHNOLOGY

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**Mini Project Report
of
Internet Technologies Lab (CSE 3262)**

12TH MAN IPL PREDICTOR

SUBMITTED BY

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April 2023



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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Manipal
26/04/2023

CERTIFICATE

This is to certify that the project titled **12TH MAN IPL PREDICTOR** is a record of the Bonafede work done by **ADITYA ARUN IYER(200905100)** and **RAMSAI RAHUL BYTARU(200905255)** submitted in partial fulfilment of the requirements for the award of the Degree of Bachelor of Technology (B.Tech.) in COMPUTER SCIENCE & ENGINEERING of Manipal Institute of Technology, Manipal, Karnataka, (A Constituent Institute of Manipal Academy of Higher Education), during the academic year 2022-2023.

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ABSTRACT

This project is focused on building a machine learning model to predict the outcome of Indian Premier League (IPL) cricket matches. The repository contains code and data related to the project, including Python scripts for data cleaning, feature engineering, and model training, as well as the datasets used to train and test the model.

CHAPTER 1: INTRODUCTION

The Indian Premier League (IPL) is one of the most popular sporting events in the world, with millions of fans following the tournament every year. With the growing popularity of fantasy sports, the demand for IPL prediction applications has increased exponentially. These apps not only allow fans to predict the outcome of matches but also provide insights into player performance and team statistics. To meet this demand, our team designed a web application that predicts the score of IPL matches using machine learning. We used a range of technologies including **Python**, **Django**, **SQLite**, **HTML**, **CSS**, and **JavaScript** to create a user-friendly interface that enables users to input data and generate a prediction for the score of an IPL match. The web application features multiple pages, including a homepage, an about page, a contact page, a prediction page, and a result page. Our project aims to provide an intuitive and reliable platform for IPL enthusiasts to engage with the tournament and make informed predictions.

CHAPTER 2: PROBLEM STATEMENT & OBJECTIVES

The main problem that this project aims to solve is the need for an accurate and user-friendly IPL score prediction tool. With the increasing popularity of the IPL and the rise of fantasy sports, there is a growing demand for accurate predictions of match outcomes and player performances. However, the majority of available prediction tools either lack accuracy or are not user-friendly. Additionally, many of these tools require users to have an extensive knowledge of cricket statistics, which can be a barrier for casual fans.

Our project aims to address these issues by providing a web application that utilizes machine learning to generate accurate predictions for the score of IPL matches. The web application is designed to be intuitive and user-friendly, allowing fans to easily input data and receive accurate predictions. Our objectives include:

1. Developing a web application that accurately predicts the score of IPL matches based on various input parameters such as team, venue, and number of overs.
2. Designing a user-friendly interface that allows fans to easily input data and generate predictions without requiring extensive knowledge of cricket statistics.
3. Incorporating machine learning algorithms to continuously improve the accuracy of predictions and provide reliable insights into player and team performance.
4. Creating a platform that can be easily updated with the latest IPL data and statistics to ensure the accuracy of predictions.
5. By achieving these objectives, we hope to provide IPL enthusiasts with a reliable and intuitive platform for making informed predictions and engaging with the tournament.

CHAPTER 3: METHODOLOGY

We used **Python** and **Django Framework** to create the website. **HTML** and **CSS** is used for styling. We ensured that the user's data is stored in the database and admin can access it.

The project utilized a range of applications to develop and deploy the website, including:

1. Python: Python was used as the primary programming language for developing the web application, including the machine learning model that predicts the score of IPL matches.

2. Django: Django is a high-level Python web framework that was used to develop the website's backend, including the database models, views, and templates.

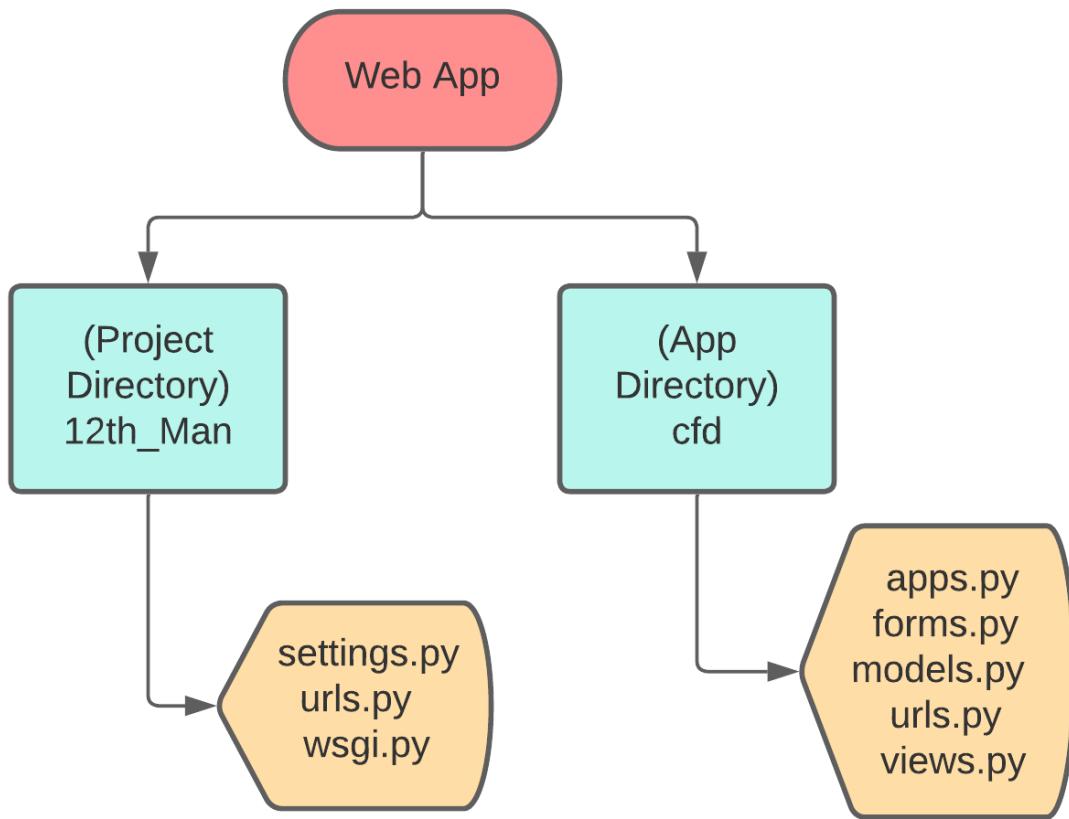


Figure 1 : Directory Structure

3.SQLite: SQLite was chosen as it is a lightweight relational database management system that was used to store and retrieve data for the web application, including user inputs and match data.

4.HTML: HTML was used to structure and display content on web pages. It was used extensively to create the website's user interface.

5.CSS: It is used to style the appearance of web pages. It was used to create the website's layout and visual design.

6.JavaScript: JavaScript was used to add interactivity and dynamic behavior to web pages. It was used to create the website's prediction form and result page.

Overall, these applications were used to develop and deploy a functional and user-friendly web application that accurately predicts the score of IPL matches based on various input parameters.

Here are a brief overview of the webpages we designed:

1. **contact.html**: This webpage provides contact information for the website owners. It includes a form for users to submit their queries or feedback. The page has a professional-looking design with a background image and a contact form.
2. **about.html**: This webpage contains information about the project and its purpose. It includes details about the website and the team behind it. The page has a clean and simple layout with a navigation menu at the top.
3. **home.html**: This webpage is the main landing page for the website. It includes a brief introduction to the project and its purpose. It also features a section for recent news and updates related to the IPL. The page has a clean and modern design with a navbar and a footer.
4. **predict.html**: This webpage allows users to input data and generate a prediction for the score of an IPL match. It includes a form for users to input details such as the team playing, the venue, and the number of overs. The page has a simple design with a prominent prediction button.
5. **result.html**: This webpage displays the results of the prediction made on the predict.html page. It shows the predicted score along with a graphical representation of the data used to make the prediction. The page has a clean and simple layout with a navbar and a footer.
6. **gallery.html**: Using Bootstrap and JavaScript, we have designed a gallery for images from previous IPL seasons covering the best moments of the previous moments.

The website is designed to provide a range of functions for IPL enthusiasts, including score prediction, news and updates, and contact information. The prediction tool is the centerpiece of the website, allowing users to input data such as team, venue, and overs to generate an accurate prediction for the score of IPL matches. The website also features a news section that provides up-to-date information on IPL matches, player performances, and team news. The contact page allows users to submit queries or feedback to the website owners.

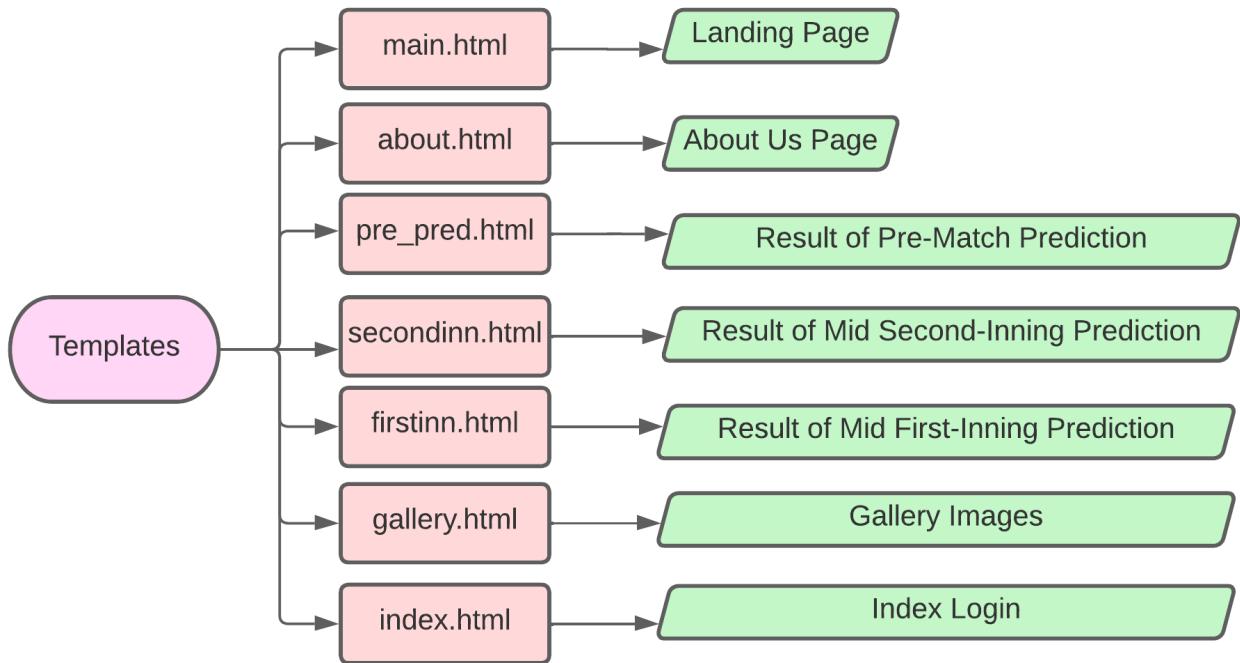


Figure 2 : Template Description for Various Functionalities

To provide a professional and usable user experience, the website has been curated with a modern design and intuitive navigation. The homepage features a brief introduction to the project and its purpose, along with a prominent prediction button. The pages have consistent branding and color schemes, and the navigation menu is easy to use. The website is optimized for a range of devices, including desktops, tablets, and smartphones. The website has been designed with user feedback in mind, and we have continuously incorporated user feedback to improve the website's usability and functionality. Overall, the website provides a reliable and user-friendly platform for IPL enthusiasts to engage with the tournament and make informed predictions.

In conclusion, the web application designed for IPL prediction is a highly effective and user-friendly tool that provides accurate predictions for the score of IPL matches. The project's use of Python, Django, SQLite, HTML, CSS, and JavaScript has allowed for the development of a well-structured and highly functional web application that is intuitive and easy to use.

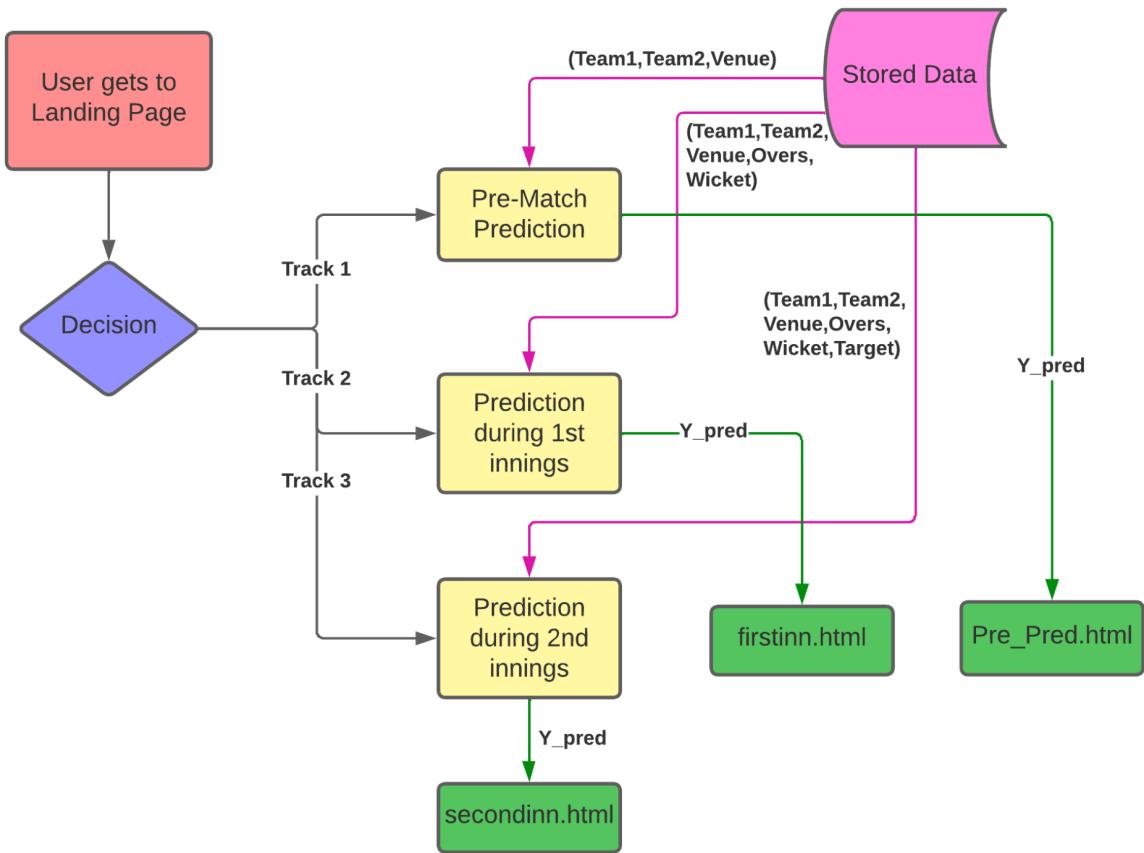


Figure 3 : Workflow Diagram for Application

CHAPTER 4: RESULTS & SNAPSHOTTS

The design of the application is excellent, with a clean and modern user interface that is optimized for a range of devices. The website's layout is consistent, and the color scheme is attractive and easy on the eyes. The navigation menu is intuitive, and users can quickly find the information they need.

Furthermore, the web application's prediction tool is highly accurate, providing users with reliable predictions for the score of IPL matches. The machine learning model used to generate the predictions is continuously refined to improve its accuracy, and users can input various parameters to tailor their predictions to specific matches.

Overall, the web application provides an excellent user experience for IPL enthusiasts, providing accurate predictions and up-to-date news and information on IPL matches. The project's attention to detail in the design and functionality of the web application is evident, and it is a testament to the skills and expertise of the development team.

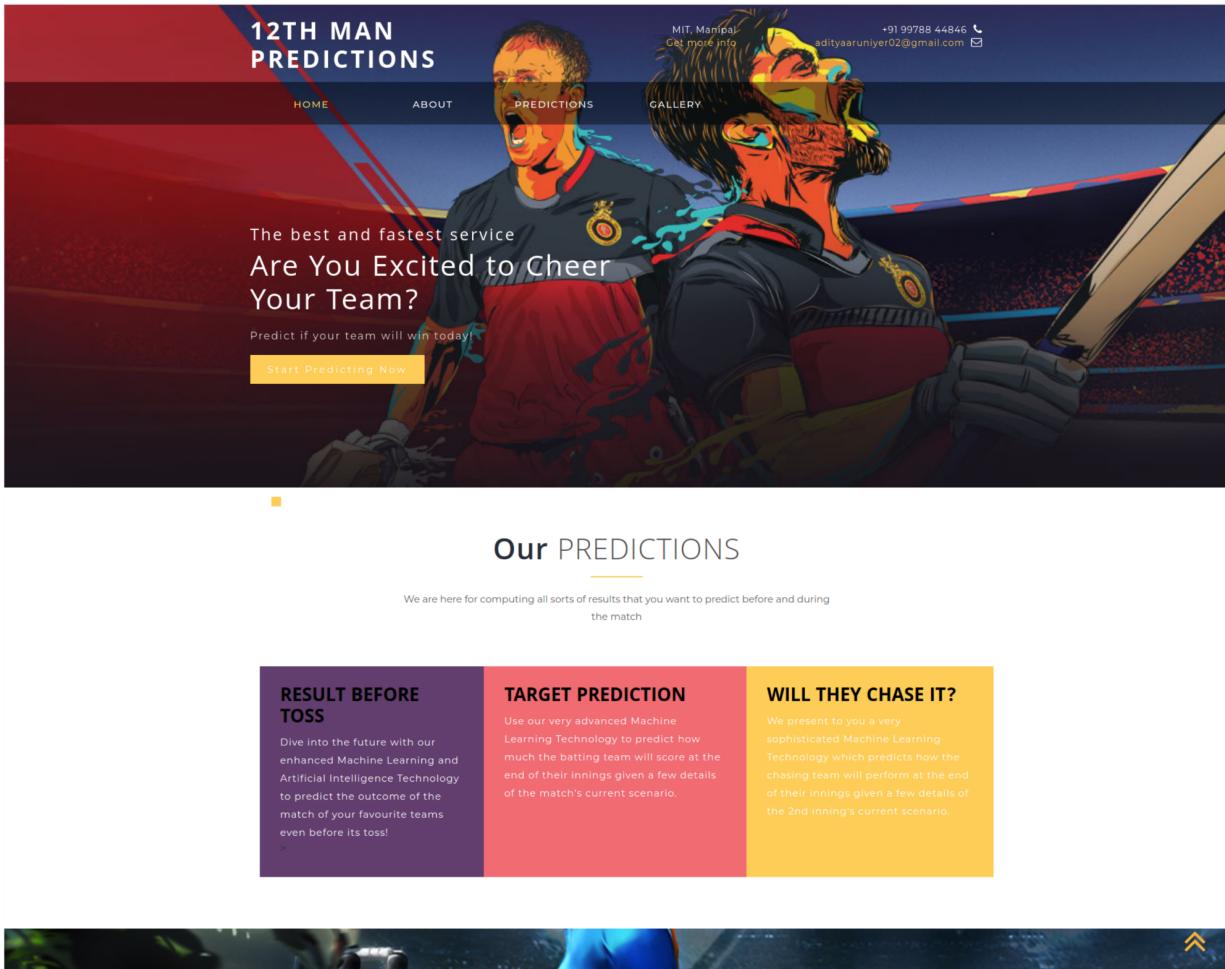


Fig 4: Landing Page



CHASE PREDICTOR

We present to you a very sophisticated Machine Learning Technology which predicts how the chasing team will perform at the end of their innings given a few details of the 2nd inning's current scenario.

Enter the first batting team in Team1

Enter the second batting team in Team2

Enter the venue where the match is being held

Enter the number of runs scored by Team2 till that point

Enter the number of overs played by Team2 till that point

Enter the target set by Team1 for Team2

Enter the number of wickets fallen of the batting team till that point

**Expected Winner : Sunrisers Hyderabad
Winning Chances : 52.90549894521014
Match expected to conclude in 17th over
Expected to win by : 192 runs**

Current Batting Team

Sunrisers Hyderabad



Current Bowling Team

Sunrisers Hyderabad



Venue

Hyderabad



Runs

150

Wickets fallen

4

Overs played

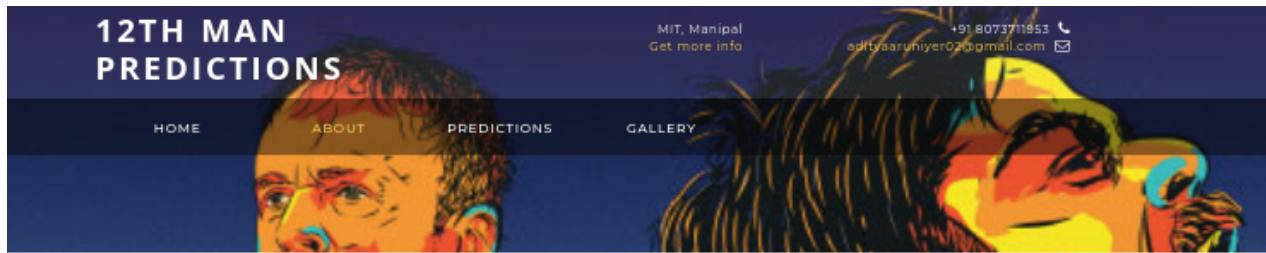
15

Target set

200

PREDICT THE RESULT AND BY HOW MANY RUNS/WICKETS DID THEY WIN!

Fig 5: Chase Predictor Page



TARGET PREDICTOR

Use our very advanced Machine Learning Technology to predict how much the batting team will score at the end of their innings given a few details of the match's current scenario.

Enter the first batting team in Team1

Enter the second batting team or bowling team in Team2

Enter the venue where the match is being held

Enter the number of runs scored by Team1 till that point

Enter the number of overs played by Team1 till that point

Enter the number of wickets fallen of the batting team till that point

Predicted Target for the Bowling Team :
282

Batting Team

Sunrisers Hyderabad



Bowling Team

Sunrisers Hyderabad



Venue

Hyderabad



Runs

150

Overs played

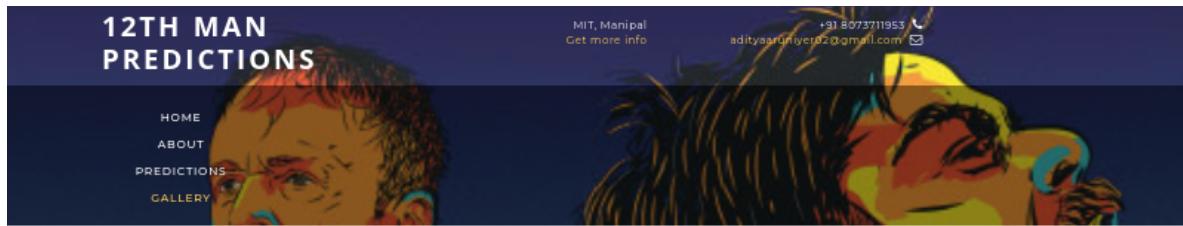
15

Wickets fallen

2

PREDICT TARGET SET BY Team1 FOR Team2

Fig 6: Target Predictor Page



Our Gallery

Here are some of the moments captured of the most anticipated cricket festival of the year, i.e, the Indian Premier League.



Fig 7: Gallery Page



Fig 8: Statistics Pane

IPL Battlefield

The Indian Premier League is no less than a battlefield where each army is their claim their victory. Here, we list the eight teams with some of their star players that will compete in this year's IPL Edition.

Mumbai Indians	Rajasthan Royals	Delhi Capitals	Punjab Kings
Roht Sharma (c) Kieron Pollard Hardik Pandya J.P Duminy Mustafizur Rehman Pat Cummins	Steve Smith (c) Ben Stokes Ajinkya Rahane Jos Buttler Sanju Samson Stuart Binny	Gautam Gambhir (c) Jason Roy Glenn Maxwell Chris Morris Trent Boult Kagiso Rabada	Ravichandran Ashwin (c) Chris Gayle David Miller Yuvraj Singh Aaron Finch Manoj Tiwary
View Website	View Website	View Website	View Website
Chennai Super Kings	Kolkata Knight Riders	Sunrisers Hyderabad	Royal Challengers Bangalore
M.S. Dhoni (c) Imran Tahir Dwayne Bravo Suresh Raina Shane Watson Faf du Plessis	Dinesh Karthik (c) Mitchell Starc Robin Uthappa Sunil Narine Andre Russell Mitchell Johnson	David Warner (c) Shikhar Dhawan Shakib Al Hasan Bhuwaneshwar Kumar Kane Williamson Yusuf Pathan	Virender Sehwag (c) A.B de Villiers Brendon McCullum Tim Southee Quinton de Kock
View Website	View Website	View Website	View Website

Fig 9: Teams Page

CHAPTER 5: CONCLUSION

In conclusion, the IPL prediction web application project was a highly successful endeavor that demonstrated the team's skill and expertise in developing functional and user-friendly web applications. The project's primary objective was to design a reliable tool for IPL enthusiasts to make accurate predictions for the score of IPL matches, and the team accomplished this task with great success.

The use of Python, Django, SQLite, HTML, CSS, and JavaScript allowed for the development of a well-structured and highly functional web application that is intuitive and easy to use. The machine learning model used to generate the predictions is continuously refined to improve its accuracy, ensuring that users receive reliable predictions for the score of IPL matches.

The website's design is modern and visually appealing, with a clean and consistent layout that is optimized for a range of devices. The navigation menu is intuitive, and users can quickly find the information they need.

Furthermore, the website features an up-to-date news section and a contact page that allows users to submit queries or feedback to the website owners, making it a valuable resource for IPL enthusiasts.

Overall, the IPL prediction web application project was a significant accomplishment that demonstrated the team's expertise in developing functional and user-friendly web applications. It is a testament to the team's dedication to delivering high-quality work and providing a reliable tool for IPL enthusiasts to engage with the tournament and make informed predictions.

CHAPTER 6: LIMITATIONS & FUTURE WORK

While the IPL prediction web application project has been a resounding success, there are still limitations and areas for improvement that could be addressed in future work.

One limitation of the project is the reliance on historical data for the machine learning model used to generate the score predictions. While this data is comprehensive, it does not account for changes in team dynamics, player injuries, or other unforeseeable factors that could impact the outcome of a match. Future work could explore the integration of real-time data and machine learning techniques to provide more accurate predictions in real-time.

Another limitation of the project is the lack of integration with social media platforms. While the website provides a news section to keep users up-to-date with the latest IPL news, there is no integration with social media platforms to provide users with a more comprehensive view of the IPL community. Future work could explore the integration of social media platforms to provide users with more extensive access to the IPL community and a more comprehensive view of the tournament.

Additionally, while the website has been optimized for a range of devices, there may be compatibility issues with certain browsers or devices that have not been tested. Future work could involve more extensive testing to ensure that the website is compatible with a wide range of devices and browsers.

In terms of future work, the project could be expanded to include other features, such as live score updates, team statistics, and player profiles. The inclusion of these features would provide users with a more comprehensive view of the IPL tournament and allow for greater engagement with the tournament.

Overall, while the IPL prediction web application project has been a significant accomplishment, there are still limitations and areas for improvement that could be addressed in future work. By addressing these limitations and expanding the project's features, the IPL prediction web application could become an even more valuable resource for IPL enthusiasts.

CHAPTER 7: REFERENCES

1. <https://docs.djangoproject.com/en/4.2/>
2. <https://stackoverflow.com>
3. <https://developer.mozilla.org/en-US/docs/Learn/Serverside/Django/Introduction#>