

**SUVATHY A**

**IPL Score Prediction USING MACHINE  
LEARNING AND DEEP LEARNING**

**REGISTER NUMBER:71772117145**

**COLLEGE NAME:GOVERNMENT COLLEGE OF  
TECHNOLOGY,COIMBATORE**



# PROJECT TITLE



Empowering Cricket Match Prediction with MACHINE  
LEARNING AND DEEP LEARNING



# AGENDA

- PROBLEM STATEMENT
- PROJET OVERVIEW
- WHOARE THE END USERS?
- SOLUTION AND ITS VALUE PROPOSITION
- THE WOW IN SOLUTION
- MODELLING
- RESULT



# PROBLEM STATEMENT

Traditional cricket match prediction approaches often lack accuracy due to the oversight of crucial factors. These oversights lead to unreliable forecasts, impacting strategic decision-making and fan engagement. Our project aims to address this challenge by leveraging cutting-edge Machine Learning (ML) and Deep Learning (DL) methodologies, alongside multifactorial analysis, to enhance cricket match prediction accuracy.






# PROJECT OVERVIEW



Our project aims to revolutionize cricket match prediction by integrating multifactorial analysis and advanced ML/DL technologies. Using libraries like NumPy, Pandas, Scikit-learn, TensorFlow, and Matplotlib, we analyze player performance, match conditions, and historical trends. Predictive models provide stakeholders with actionable insights, and an interactive widget enhances fan engagement by allowing users to input match scenarios. Rigorous model training ensures reliable predictions, ultimately redefining cricket prediction accuracy.



# WHO ARE THE END USERS?

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1. **Team Management:** Coaches, analysts, and managers for strategic planning, player selection, and match tactics.
  2. **Broadcasters and Media:** Reliance on predictions for pre-match analysis, commentary, and post-match discussions.
  3. **Betting and Gaming Platforms:** Utilization of predictions to offer betting odds and create engaging experiences.
  4. **Cricket Fans:** Engagement in interactive analysis to enhance viewing experience.
  5. **Cricket Associations and Governing Bodies:** Use of predictions for scheduling, tournament planning, and team assessment.
  6. **Sponsors and Advertisers:** Leverage predictions for targeted advertising and sponsorship opportunities.
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# YOUR SOLUTION AND ITS VALUE PROPOSITION



## **Solution:**

Utilizing the provided dataset, our solution employs a systematic approach to cricket match prediction. Leveraging TensorFlow and Keras, we develop a neural network model with Huber Loss, ensuring robustness.

## **Value Proposition:**

Our solution offers accurate predictions through rigorous data preprocessing, model training, and evaluation. This empowers stakeholders with actionable insights for strategic decision-making, enhancing fan engagement and providing valuable opportunities for betting platforms and sponsors.

# THE WOW IN YOUR SOLUTION



- In-depth Data Analysis: Our solution utilizes multifactorial analysis to consider player performance, match conditions, and historical trends, ensuring a holistic prediction approach.
- Cutting-edge ML/DL Techniques: Employing advanced TensorFlow and Keras models with Huber Loss, we achieve unparalleled accuracy in match forecasting.
- Interactive Widget: Our intuitive ipywidgets-based widget enables users to engage directly with predictions, providing a personalized experience.
- Strategic Insights: By delivering precise predictions and actionable insights, our solution enhances decision-making and fan engagement, setting new standards in cricket analytics.

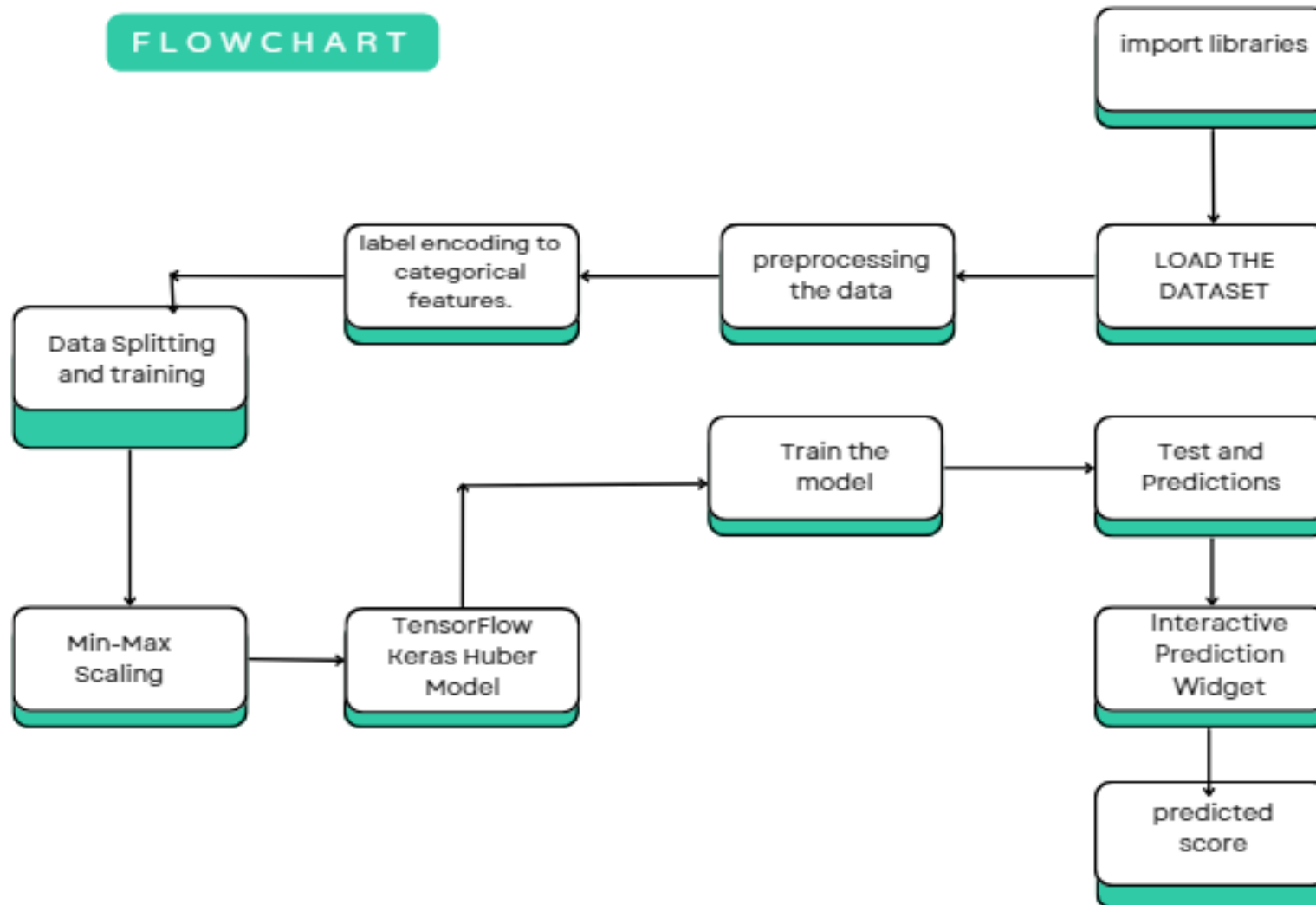




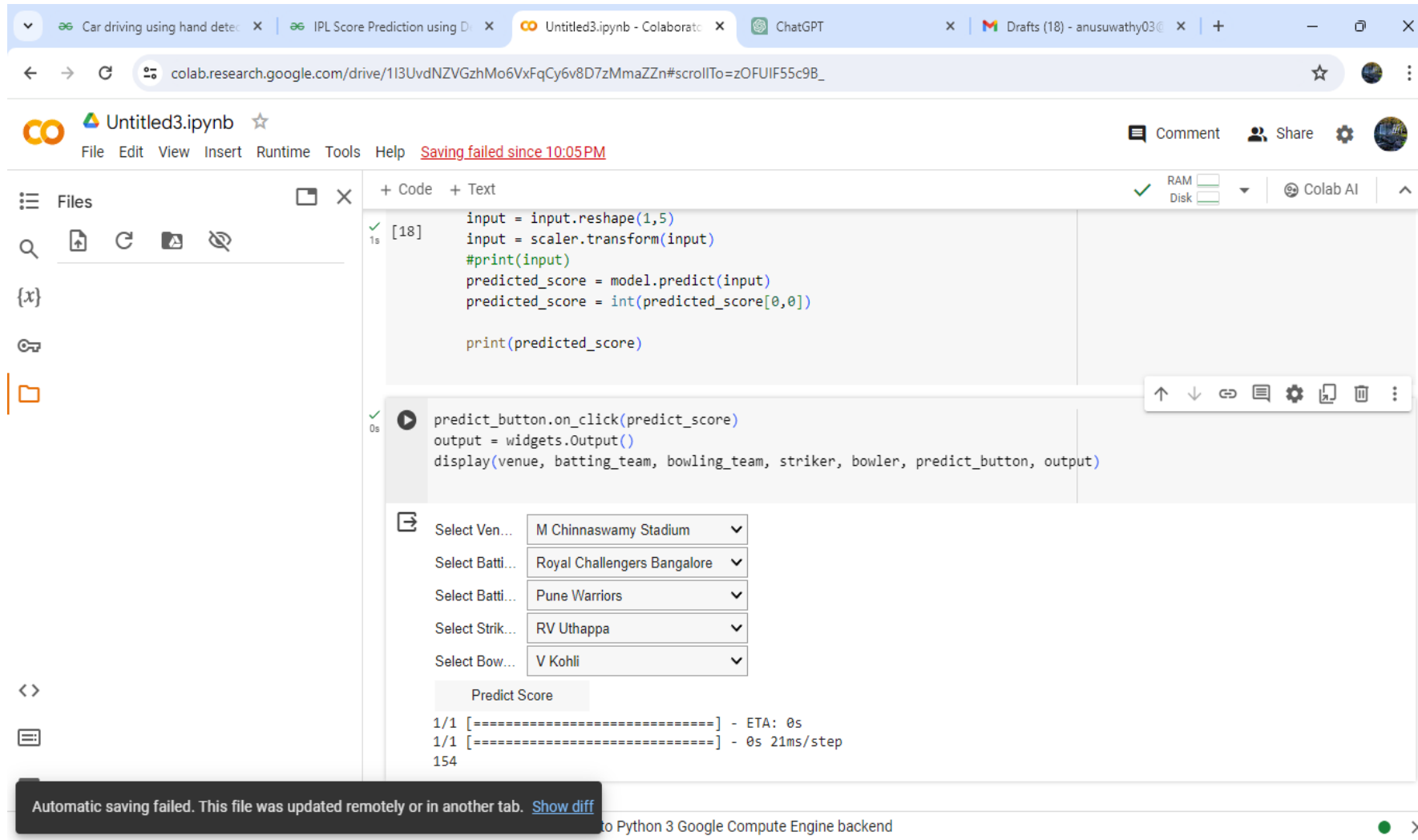
# MODELLING

Teams can add wireframes

## FLOWCHART



# RESULTS



The screenshot displays a Google Colab notebook titled 'Untitled3.ipynb'. The interface includes a top navigation bar with tabs for 'Car driving using hand detect', 'IPL Score Prediction using D...', 'Untitled3.ipynb - Colaborate', 'ChatGPT', and 'Drafts (18) - anusuwathy03@'. The main workspace is divided into a 'Code' section and a 'Text' section. The 'Code' section contains two code blocks. The first block, executed at 1s, defines a function to predict the score based on venue, batting team, bowling team, striker, and bowler. The second block, executed at 0s, calls this function with the following inputs: venue = 'M Chinnaswamy Stadium', batting\_team = 'Royal Challengers Bangalore', bowling\_team = 'Pune Warriors', striker = 'RV Uthappa', and bowler = 'V Kohli'. The output of the function is displayed as a dictionary: {'venue': 'M Chinnaswamy Stadium', 'batting\_team': 'Royal Challengers Bangalore', 'bowling\_team': 'Pune Warriors', 'striker': 'RV Uthappa', 'bowler': 'V Kohli', 'predicted\_score': 154}. Below the code, there is a 'Predict Score' button and a progress bar showing the execution status. A notification at the bottom states 'Automatic saving failed. This file was updated remotely or in another tab. Show diff'.

```
[18] input = input.reshape(1,5)
input = scaler.transform(input)
#print(input)
predicted_score = model.predict(input)
predicted_score = int(predicted_score[0,0])

print(predicted_score)

predict_button.on_click(predict_score)
output = widgets.Output()
display(venue, batting_team, bowling_team, striker, bowler, predict_button, output)
```

Select Ven... M Chinnaswamy Stadium  
Select Batti... Royal Challengers Bangalore  
Select Batti... Pune Warriors  
Select Strik... RV Uthappa  
Select Bow... V Kohli

Predict Score

1/1 [=====] - ETA: 0s  
1/1 [=====] - 0s 21ms/step  
154

Automatic saving failed. This file was updated remotely or in another tab. [Show diff](#)

[https://github.com/SUVA-tech/Naan\\_Mudhalvan\\_Gen\\_AI\\_project.git](https://github.com/SUVA-tech/Naan_Mudhalvan_Gen_AI_project.git)

3/21/2024 Annual Review