Project Design Phase-II

Technology Stack (Architecture & Stack)

Date	27 October 2023
Team ID	Team-591627
Project Name	T20 Totalitarian: Mastering Score Predictions
Maximum Marks	4 Marks

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

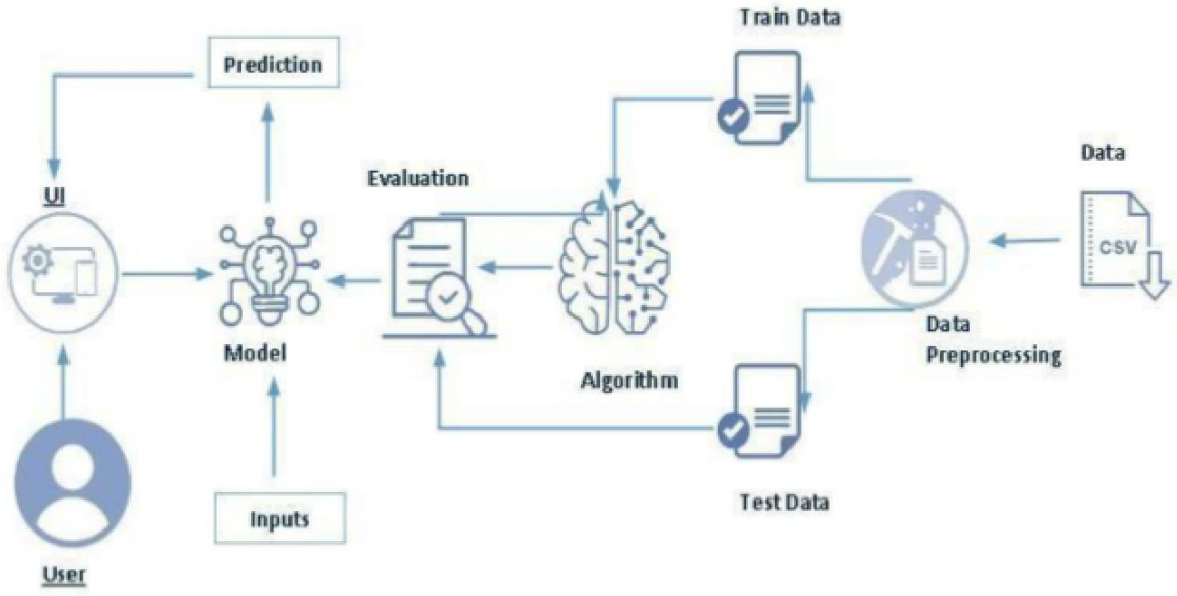

Table-1: Components & Technologies:

S.No	Component	Description	Technology
1	Data collection	Responsible for gathering historical T20 cricket data	Python (Pandas, JSON parsing)
2	Data Preprocessing	Cleans and prepares collected data	Python (Pandas, Data cleaning)
3	Feature Engineering	Creates new features for better predictions	Python (Pandas, Feature engineering)
4	Data Transformation	Converts categorical data into machine-readable format	Python (Scikit-learn)
5	Model Selection and Training	Chooses and trains the machine learning model	Python (Scikit-learn)
6	Model Evaluation	Assesses model performance using metrics	Python (Scikit-learn)
7	Model Saving and Persistence	Saves the best-performing model for future use	Python (Pickle)
8	Prediction Display on Web	Shows predictions on a web interface	Web Development (HTML, CSS, JavaScript)

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1	User-Friendly Interface	The application should provide an intuitive and user-friendly web interface for users to access predictions easily.	Web Development (HTML, CSS, JavaScript)
2	Data Security	Ensure that collected and processed data is secure, and implement user authentication to protect predictions.	Web Development (Security Libraries)
3	Scalability	Design the system to handle a growing volume of historical data and real-time user requests efficiently.	System Architecture (Cloud Services, Load Balancing)

4	Real-Time Predictions	The application should provide real-time predictions for ongoing T20 cricket matches.	Machine Learning (Real-time Scoring)
5	High Prediction Accuracy	Strive for high prediction accuracy to provide valuable insights to cricket enthusiasts and analysts.	Machine Learning (Regression Models)
6	Accessibility	Ensure that the web interface is accessible to a broad range of users, including those with disabilities.	Web Development (Accessibility Standards)
7	Documentation	Provide comprehensive documentation for users and developers to understand and use the application effectively.	Documentation (User Guides, API Documentation)