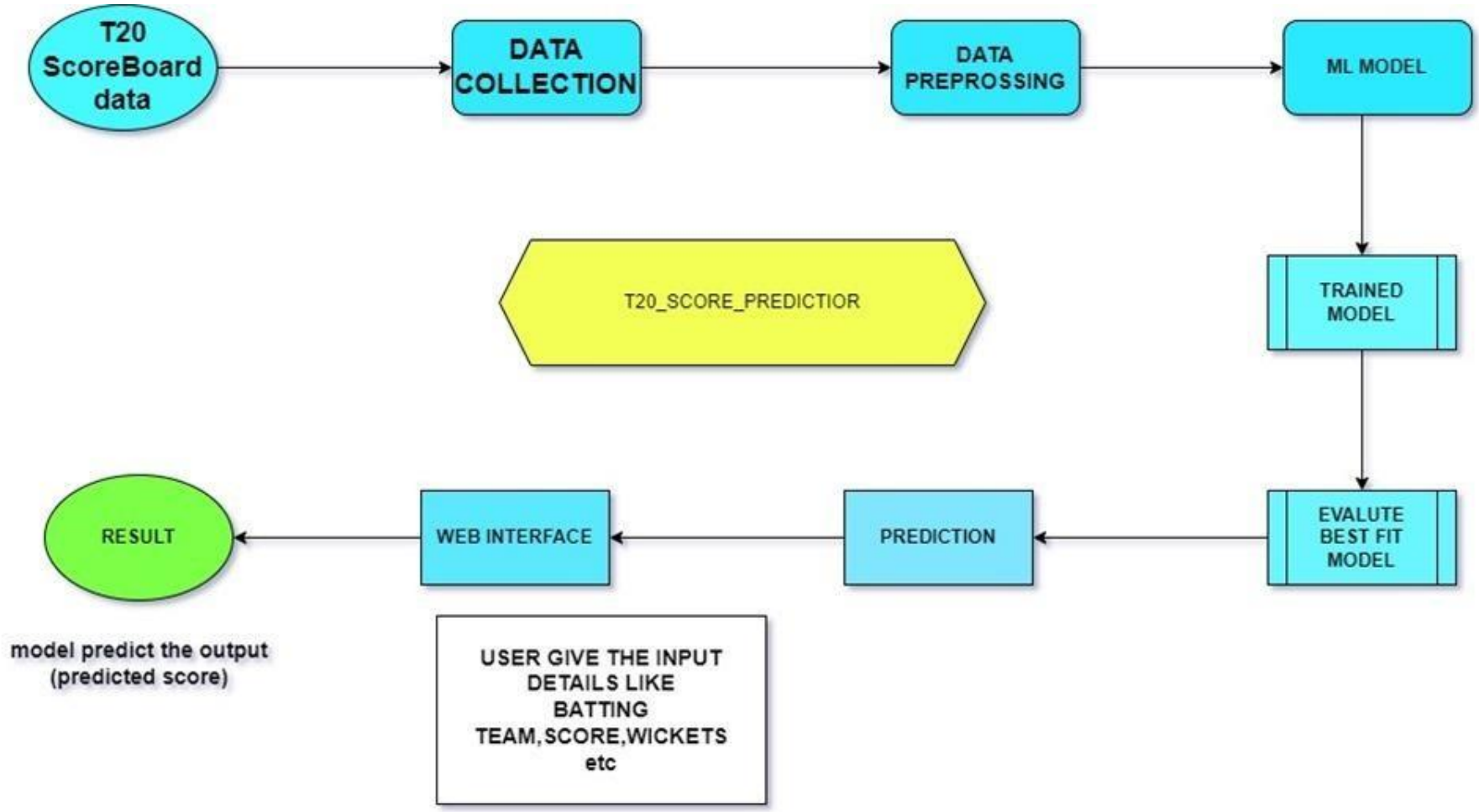
Project Design Phase-II
Technology Stack (Architecture & Stack)

Date	17 November 2023
Team ID	Team-591790
Project Name	Project – 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

Reference: https://ijcrt.org/papers/IJCRT2105677.pdf



Figures: Architecture and data flow of the T20-score prediction model

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application e.g. Web UI, Mobile App, Chatbot etc.	HTML, CSS, JavaScript / Angular Js / React Js etc.
2.	Programming Languages used	Programming Language to understand our commands	Java / Python
3.	Execution of code	To Execute the code an to create a model	Jupyter Notebook / Google colab for execution of the code
4.	Web Interface	To create the form and connect it to the backend data	Streamlit for the webinterface,forms,webdevelopment /flask module
5.	Database	Data Type, Configurations etc.	MySQL, NoSQL, etc.
6.	DataSet collection	Dataset,no of rows and columns,data type	Kaggle / Github/Google
7.	File storage	File storage requirements	Stored in Internal memory of system
8.	Python Modules-1	For preprocessing the data from data set, for visuliazation and analysis of data	Numpy,Pandas,Seaborn,
9.	Python Modules-2	Model building and implementation of machinelearning algorithms like classification,regression,decision tree,Random forest etc.	Sklearn library/XGB Boost

10.	Machine Learning Algorithms	Random forest algorithm used due to its high accuracy,robustness,feature importance , versatility to the model as it performs bagging technique.XGB Reggresor is used for regression problems where the intent is to predict continuous numericalvalues.	Random Forest and XGB Regressor

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Sklearn is most usefuland robust framework for machine learning in python.Tensorflow is a library for machine learning tasks.Xg Boost is a open source framework for algorthms like regression,classification.	Sklearn, Tenosrflow,Keras,Xg Boost
2.	Security Implementations	List all the security / access controls implemented, use of firewalls etc.	e.g. SHA-256, Encryptions, IAM Controls, OWASP etc.
3.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	Streamlit
S.No	**Characteristics**	**Description**	**Technology**
4.	Availability	Available for everyone as a application	Html,css for userinterface,Streamlit or flask
5.	Performance	The accuracy of the model is 93 percent.	Random forest Algorithm,xb boost

References: https://ijcrt.org/papers/IJCRT2105677.pdf

https://www.geeksforgeeks.org/ipl-score-prediction-using-deep-learning/

https://www.geeksforgeeks.org/a-beginners-guide-to-streamlit/