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

Date	03 October 2022
Team ID	PNT2022TMID22690
Project Name	Exploratory Analysis of Rain Fall Data in India for Agriculture
Maximum Marks	4 Marks

Technical Architecture:

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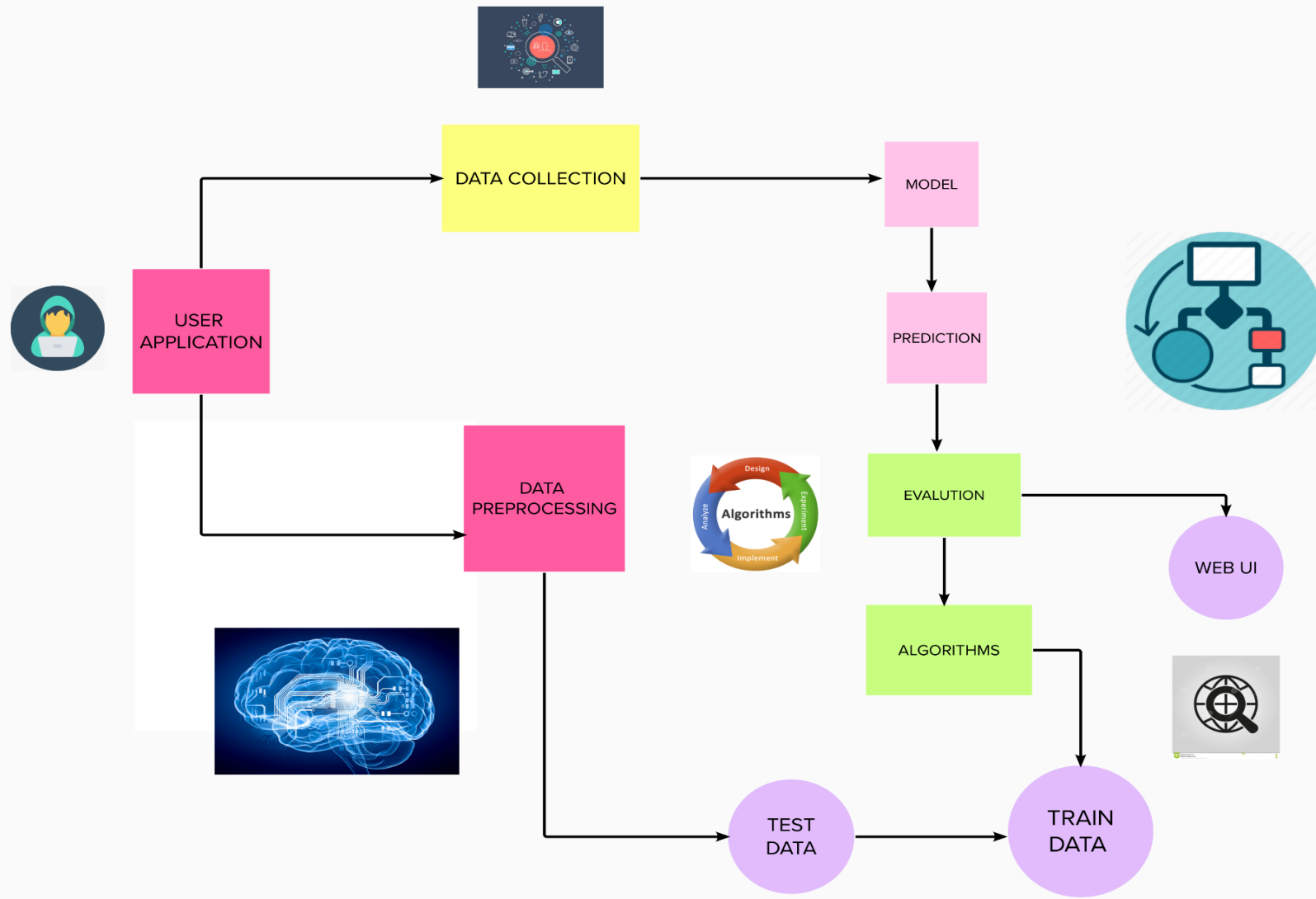
USER APPLICATION

DATA COLLECTION

MODEL

PREDICTION

DATA PREPROCESSING

Algorithms

EVALUTION

WEB UI

ALGORITHMS

TEST DATA

TRAIN DATA

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, Python,flask
2.	Application Logic-1	Logic for a process in the application	Python
3.	Application Logic-2	Logic for a process in the application	python
4.	Application Logic-3	Logic for a process in the application	Python flask
5.	Database	Data Type, Configurations etc.	MySQL
6.	Cloud Database	Database Service on Cloud	IBM Cloudant
7.	File Storage	To store files for prediction	Local Filesystem
8.	External API	Allows developers access to critical forecasts,a;erts and observations.	IBM Weather API
9.	Machine Learning Model	Predictive modeling is a statistical technique using machine learning and data mining to predict.	Predictive modelling
10.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration:built-in flask web server	flask web server

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Backend framework,css styling	Python flask, IBM Cloud DB
2.	Security Implementations	User registration,HTTP authentication	Encryptions,flask
3.	Scalable Architecture	Support for multiple prediction in the excel	Pandas,Numpy
4.	Availability	Compatibility with latest technologies	IBM cloud hosting
5.	Performance	Uses ninja templating,support for secure cookies,It predict multiple predictions per second	Distributed servers