

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

Date	03 October 2022
Team ID	PNT2022TMID10910
Project Name	Project - Exploratory Analysis of Rainfall 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

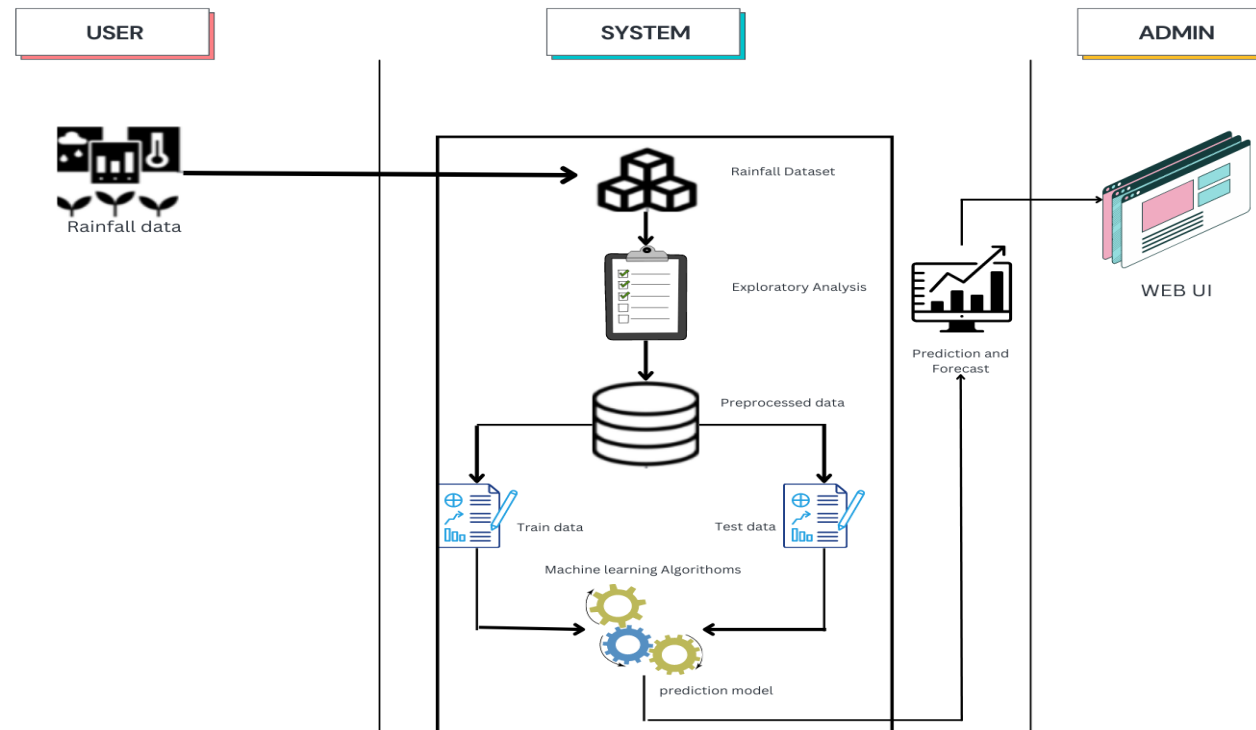


Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	The user interacts with the application through a web UI.	HTML, CSS, python, Flask
2.	Application Logic-1	Logic for registration.	Python
3.	Application Logic-2	Logic for login to the application.	Python
4.	Application Logic-3	Integrating machine learning model and the webpage	Flask
5.	Database	Numeric data.	MySQL, NoSQL, etc.
6.	Cloud Database	Database Service on Cloud	MySQL
7.	File Storage	To store files such as prediction report	Local Filesystem
8.	External API-1	Allows developers access to critical forecasts, alerts, and observations, along with other weather data	IBM Weather API.
9.	Machine Learning Model	Predictive modeling is a statistical technique using machine learning and data mining to predict and forecast likely future outcomes with the aid of historical and existing data	Predictive modeling
10.	Infrastructure (Server / Cloud)	Application Deployment on Local System Local Server Configuration: built-in flask web server	Flask web Server.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Flask	Micro web framework written in python
2.	Security Implementations	Basic HTTP authentication, Session based authentication, User Registration, Login Tracking	Flask Security
3.	Scalable Architecture	Size is everything, and Flask's status as a microframework means that you can use it to grow a tech project such as a web app incredibly quickly. Its simplicity of use and few dependencies enable it to run smoothly even as it scales up and up.	Flask
4.	Availability	Higher compatibility with latest technologies and allows customization	Flask
5.	Performance	<ul style="list-style-type: none">● Integrated support for unit testing.● RESTful request dispatching.● Uses Jinja templating.● Support for secure cookies (client side sessions)● 100% WSGI 1.0 compliant	Flask