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

Date	17 October 2022
Team ID	PNT2022TMID02252
Project Name	Project - 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
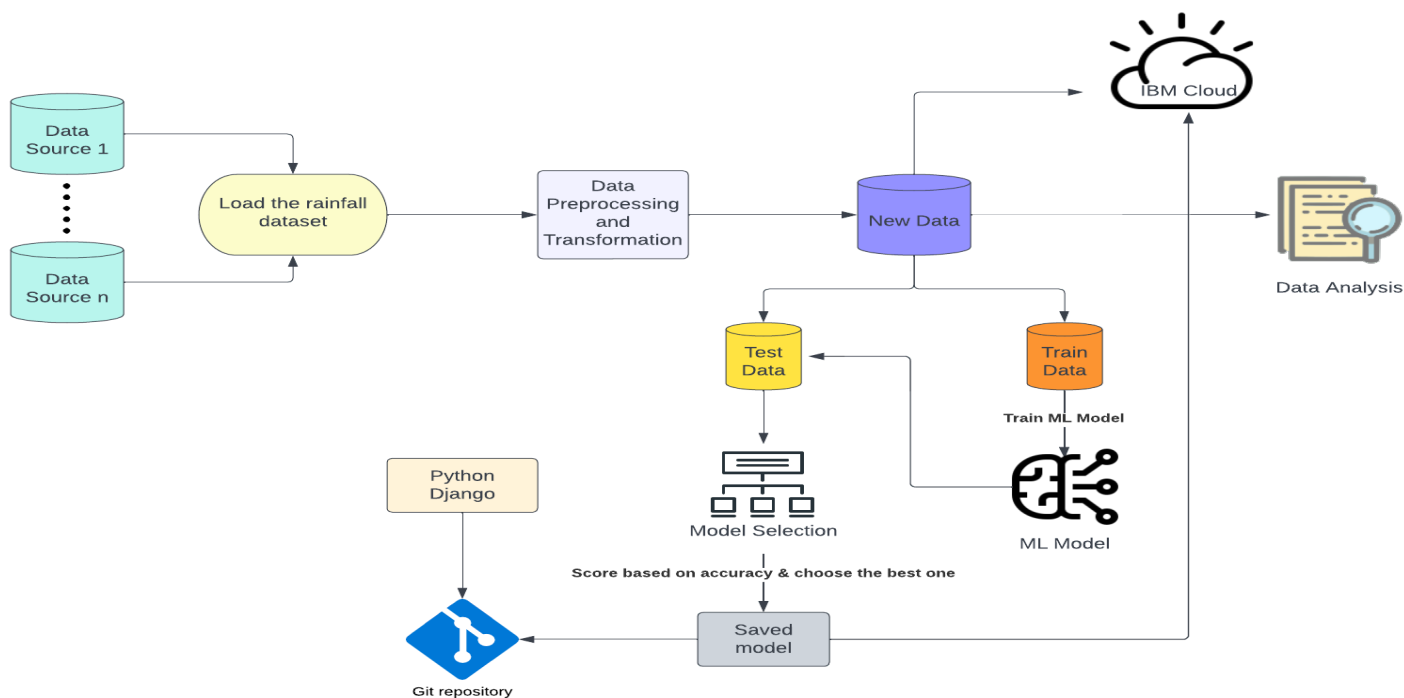
Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application	HTML, CSS, JavaScript, Bootstrap
2.	Login	Logic for a process in the application	Python
3.	Data Preprocessing	Loading rainfall dataset	NumPy, Pandas, MatplotLib
4.	Visualization	Creating plots and graphs based on prediction	MatplotLib,Seaborn
5.	Database	Data Type, Configurations etc.	CSV Store, NoSQL
6.	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloudant
7.	Machine Learning Model	Predicting the rainfall status in specific areas	Prediction models(Random Forest Classifier,Logistic Regression)
8.	Infrastructure (Server / Cloud)	Application Deployment on Cloud	IBM Watson

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Backend Framework, Database, CSS Framework styling	Python Django,Bootstrap
2.	Security Implementations	Email Verification	Direct verification using Backend Framework
3.	Scalable Architecture	Accommodate resources according to demand	IBM Cloud
4.	Availability	Improve resource availability by cloud hosting	IBM Cloud
5.	Performance	Handle multiple requests and provide accurate results,customized suggestion reports instantly	IBM Cloud Load Balancer