

Project Design Phase-II

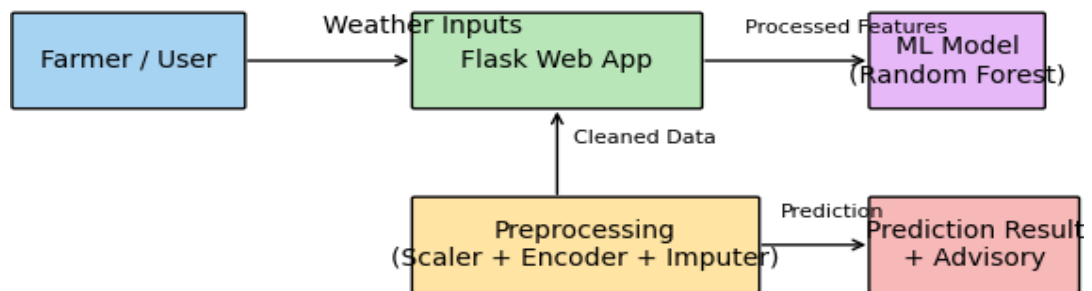
Data Flow Diagram & User Stories

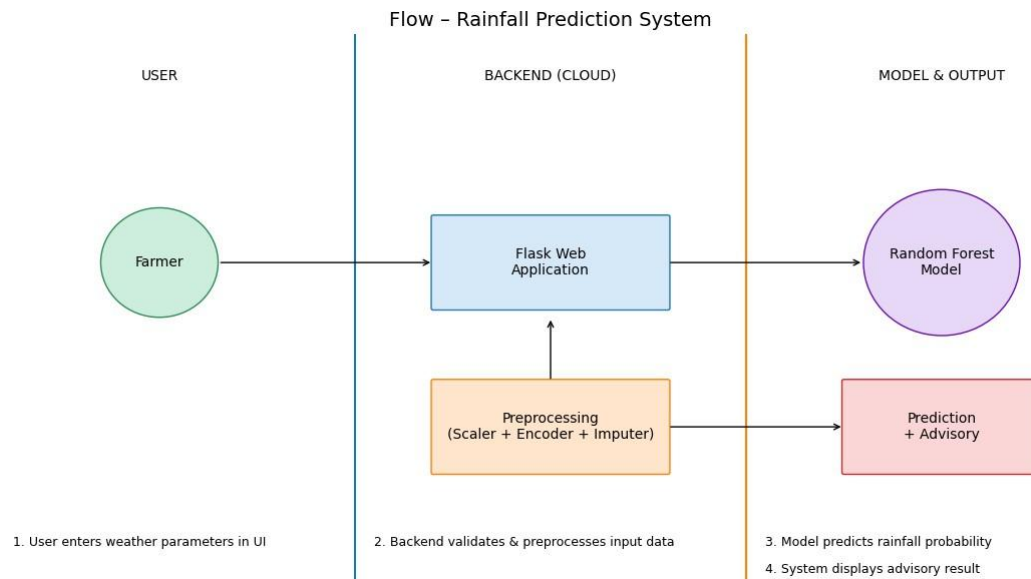
Date	19 February 2026
Team ID	LTVIP2026TMIDS90138
Project Name	Rainfall Prediction System for Agriculture
Maximum Marks	4 Marks

Data Flow Diagrams:

The Data Flow Diagram represents how user input travels through the system. The farmer enters weather-related parameters in the web interface. The Flask backend processes the input, applies preprocessing (scaling, encoding, imputation), and sends it to the trained Random Forest model. The model generates a rainfall prediction probability, and the system displays either Rain Expected or No Rain Expected along with agricultural advisory.

Data Flow Diagram – Rainfall Prediction System





User Stories

Use the below template to list all the user stories for the product.

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Farmer (Web user)	Rainfall Prediction & Advisory System	USN-1	As a farmer, I can enter weather parameters (temperature, humidity, pressure, rainfall, wind speed, etc.) into the web application.	The system accepts input and processes it without errors.	High	Sprint-1
		USN-2	As a farmer, I can receive rainfall prediction results with probability percentage.	The system displays Rain Expected or No Rain Expected along with probability.	High	Sprint-1
		USN-3	As a farmer, I can view agricultural advisory	Advisory suggestions are shown	High	Sprint-1

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
			recommendations based on prediction. through Facebook	dynamically based on result.		
Administrator (User Type)		USN-4	As an administrator, I can update or retrain the ML model when new rainfall data becomes available.	Updated model can be deployed without affecting user interface.	Medium	Sprint-2
		USN-5	As an administrator, I can monitor system performance and model accuracy.	Model accuracy metrics are available from evaluation reports.	Medium	Sprint-2