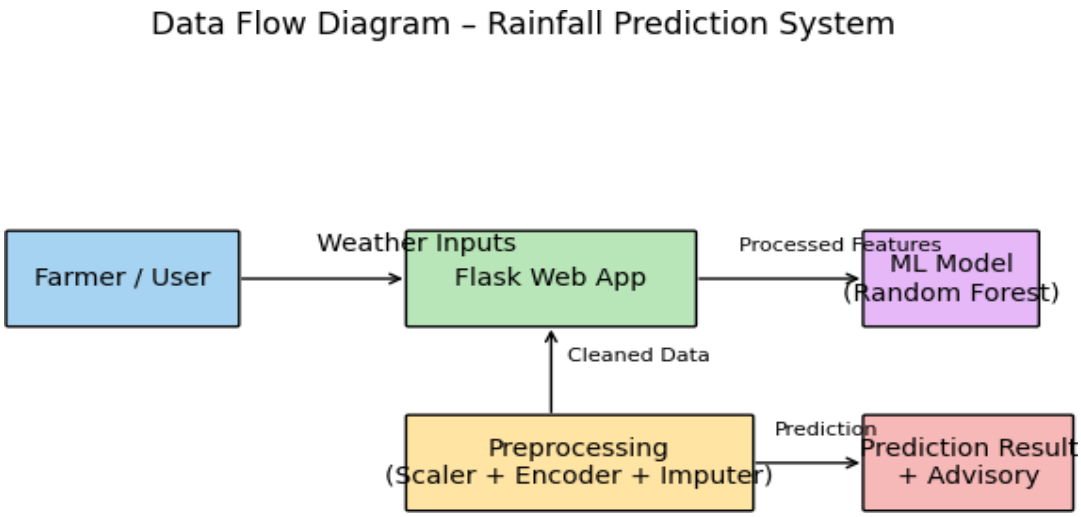
Project Design Phase-II

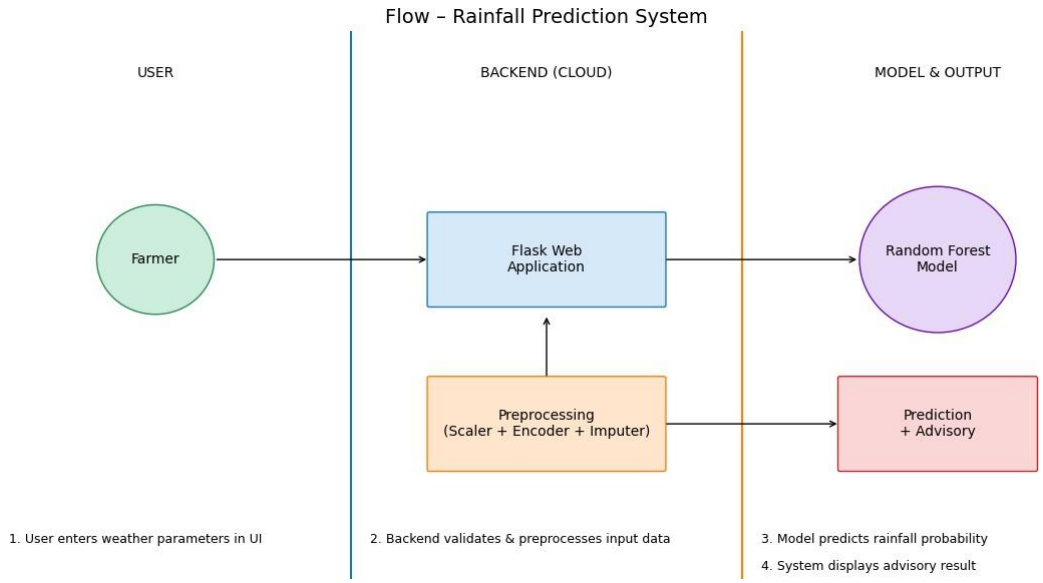
Data Flow Diagram & User Stories

Date	19 February 2026
Team ID	LTVIP2026TMIDS49897
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.





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