Project Design Phase-II
Solution Requirements (Functional & Non-functional)

Date	31 January 2025
Team ID	LTVIP2026TMIDS56565
Project Name	Rising Waters: A Machine Learning Approach to Flood Prediction
Maximum Marks	4 Marks

Functional Requirements:

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	Data Input	Manual entry of environmental factors (Rainfall, Temp, Humidity, etc.)
FR-2	Flood Classification	Process inputs through Random Forest model to determine risk levels
FR-3	Real-Time Prediction	Immediate display of "DANGER" or "SAFE" alerts on the UI
FR-4	Categorical Selection	User selection for Land Cover and Soil Type via dropdowns

Non-functional Requirements:

Following are the non-functional requirements of the proposed solution.

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	Simple, intuitive dashboard requiring no prior ML knowledge for the user
NFR-2	**Reliability**	Consistent predictions using an ensemble approach to reduce variance
NFR-3	**Performance**	Prediction results generated in sub-second time once "Predict" is clicked
NFR-4	**Accuracy**	Maintain a minimum classification accuracy of 88%