

**PROJECT DESIGN PHASE-II**  
**Solution Requirements (Functional & Non-functional)**

<b>Date</b>	<b>17-October-2022</b>
<b>Team ID</b>	<b>PNT2022TMID30068</b>
<b>Project Name</b>	<b>Exploratory Analysis of Rainfall Data in India for Agriculture</b>
<b>Maximum Marks</b>	<b>4 Marks</b>

**Functional Requirements:**

<b>FR No.</b>	<b>Functional Requirement (Epic)</b>	<b>Sub Requirement (Story / Sub-Task)</b>
FR-1	Registration Process	Registration through Phone Number
FR-2	Confirmation	Confirmation via OTP message
FR-3	Updating Profile	Enter the personal details
FR-4	Home Page	Able to view the <ul style="list-style-type: none"><li>• Profile</li><li>• Crop details</li><li>• Rainfall prediction</li></ul>
FR-5	Rainfall Prediction	<ul style="list-style-type: none"><li>• Enter the month</li><li>• Enter the Year</li><li>• Click on predict</li></ul>
FR-6	ML Model	The user data is sent to the Machine learning model.
FR-7	Preprocessing data	<ul style="list-style-type: none"><li>• Data exploration</li><li>• Feature selection</li><li>• Missing values</li><li>• Feature scaling</li><li>• Splitting of train and test data</li></ul>
FR-8	Building ML Model	<ul style="list-style-type: none"><li>• Random forest algorithm is applied</li><li>• Train the model using training data</li><li>• The model is evaluated with the test data.</li></ul>
FR-9	Result	Shows the predicted rainfall data.

## Non-functional Requirements:

FR No.	Non-Functional Requirement	Description
NFR-1	<b>Usability</b>	It's a user-friendly application which enable people to use without any technical knowledge.
NFR-2	<b>Security</b>	User data will be protected from unauthorised access and the data are secured.
NFR-3	<b>Reliability</b>	The application will operate effectively without causing any failure and errors, so maintance won't be big problem.
NFR-4	<b>Performance</b>	Overall performance of system is efficient to predict the rainfall with much speed without delay.
NFR-5	<b>Availability</b>	The availability of the application is that it will be active and available to all the users.
NFR-6	<b>Scalability</b>	The scalability of our system is one that can handle rapid changes to workloads and user demands.