

# Requirements Analysis [Functional & Non-functional]

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| Date          | 05 October 2022   |
| Team ID       | PNT2022TMID22613  |
| Project Name  | <b>Exploratory Analysis of RainFall Data in India for Agriculture</b> |
| 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   | User Registration             | Registration via form or email ID and password creation  |
| FR-2   | User Confirmation             | Confirmation via Email or OTP  |
| FR-3   | User Login                    | Using the registered email ID and password as login credentials  |
| FR-4   | Profile Dashboard             | Viewing the profile, changing the password and pages navigation  |
| FR-4   | Searching                     | Searching for results and information by place and region  |
| FR-5   | Visualization                 | Visualizing the user-specific data in different forms  |
| FR-6   | Prediction                    | Giving inputs to get the prediction on rainfall using an ML-based model  |
| FR-7   | User tracking                 | Maintaining the history of the user's search operations  |
| FR-8   | Feedback & Support            | Collecting feedback against the accuracy of the prediction for further improvement and feature inclusion in other modules or functionalities |

## Non-functional Requirements:

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

| FR No. | Non-Functional Requirement | Description   |
|--------|----------------------------|---|
| NFR-1  | Usability                  | <ul style="list-style-type: none"><li>• The system should administer a quality attribute that assesses how easy <i>user interfaces</i> are to use</li><li>• The system doesn't expect any technical pre-requisites from the user's side</li></ul>   |
| NFR-2  | Security                   | <ul style="list-style-type: none"><li>• User details and login credentials should be safe and secure</li><li>• The confirmation of a valid user is required for authentication</li></ul>  |
| NFR-3  | Reliability                | <ul style="list-style-type: none"><li>• Portable and cross-platform independent</li><li>• The application should be subjected to an experiment, test, or measuring procedure that yields the same results on repeated trials</li><li>• Easy to use and flexible</li></ul>   |
| NFR-4  | Performance                | <ul style="list-style-type: none"><li>• The system should handle the traffic efficiently and service requests while consuming less bandwidth</li><li>• The accuracy of the result of a measurement, calculation, or specification should be dependent the datasets</li><li>• The page should not take a lot of time to load the contents and display them</li></ul> |
| NFR-5  | Availability               | <ul style="list-style-type: none"><li>• The version of the application should be available even at the time of maintenance and updating</li><li>• The system should run 24 hours a day, 7 days a week [24/7 available]</li></ul>  |
| NFR-6  | Scalability                | <ul style="list-style-type: none"><li>• The application should be in the way of adding new functionalities or modules without affecting the existing functionalities</li><li>• The system should be able to manage numerous users at a time and be less prone to errors</li></ul>   |