Requirements Analysis [Functional & Non-functional]

|  |  |
| --- | --- |
| Date | 19 November 2022 |
| **Team ID** | PNT2022TMID50196 |
| Project Name | **Exploratory Analysis of RainFall Data in India for Agriculture** |
| 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 | * The system should administer a quality attribute that assesses how easy *user interfaces* are to use * The system doesn’t expect any technical pre- requisites from the user’s side |
| NFR-2 | Security | * User details and login credentials should be safe and secure * The confirmation of a valid user is required for authentication |
| NFR-3 | Reliability | * Portable and cross-platform independent * The application should be subjected to an experiment, test, or measuring procedure that yields the same results on repeated trials * Easy to use and flexible |
| NFR-4 | Performance | * The system should handle the traffic efficiently and service requests while consuming less bandwidth * The accuracy of the result of a measurement, calculation, or specification should be dependent the datasets * The page should not take a lot of time to load the contents and display them |
| NFR-5 | Availability | * The version of the application should be available even at the time of maintenance and updating * The system should run 24 hours a day, 7 days a week   *[24/7 available]* |
| NFR-6 | Scalability | * The application should be in the way of adding new functionalities or modules without affecting the existing functionalities * The system should be able to manage numerous users at a time and be less prone to errors |