

Requirements Analysis [Functional & Non-functional]

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| Date | 03 October 2022 |
| Team ID | PNT2022TMID40045 |
| 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 | <ul style="list-style-type: none"> • The system should administer a quality attribute that assesses how easy <i>user interfaces</i> are to use • The system doesn't expect any technical prerequisites from the user's side |
| NFR-2 | Security | <ul style="list-style-type: none"> • User details and login credentials should be safe and secure • The confirmation of a valid user is required for authentication |
| NFR-3 | Reliability | <ul style="list-style-type: none"> • 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 | <ul style="list-style-type: none"> • 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 | <ul style="list-style-type: none"> • 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] |

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| NFR-6 | Scalability | <ul style="list-style-type: none"> • 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 |
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