

User Experience

Team Information

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1. Overview of the User Interface (UI)

- **Briefly describe the application's user interface.**
 - The web interface is created using streamlit library which is easy to use and perfect for rapid development.
 - The interface is easy to use and understand. Structure of the interfaces is as follows,
 - ✓ **Home Page** – contains overview of the project.
 - ✓ **Predict Page** - contains a form to collect input data from the user for the model to make predictions after applying certain preprocessing techniques.
 - ✓ **Recent Estimations** – contains recent estimations of the model in a tabular format.
 - ✓ **Model selection & evaluation** – contains details about the implemented models and datasets.
- **What are the core UI components (e.g., forms, dashboards, charts, navigation menus)?**
 - Forms
 - Input elements
 - Images
 - DataFrames
- **Attach screenshots or wireframes of the interface.**
- **Attach screenshots of the final UI.**

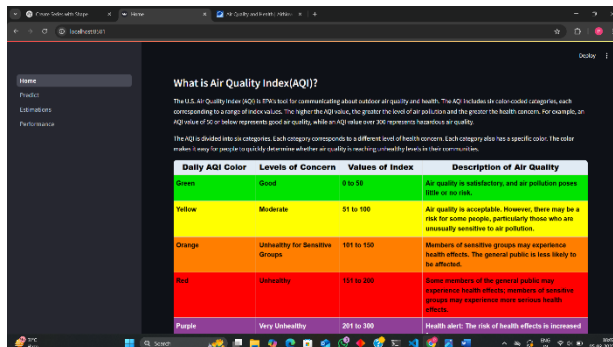


Figure 1 : Home page - overview

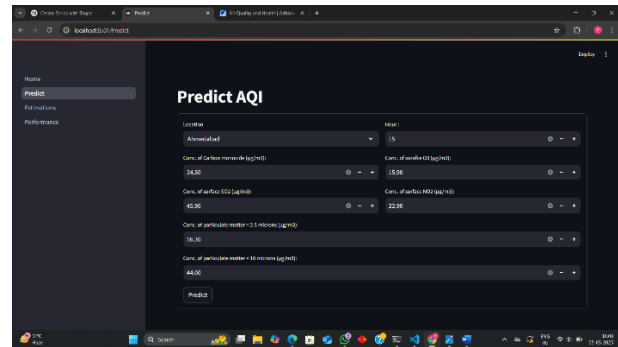


Figure 2 : Predict - enter the data to estimate AQI

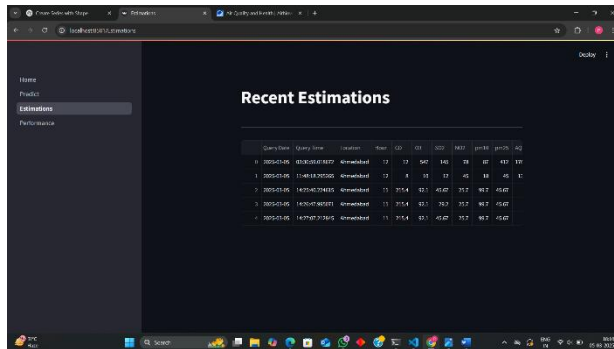


Figure 3 : Recent Estimation - provides the recent predictions

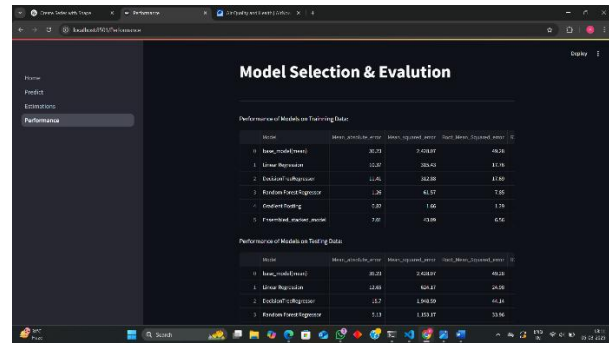


Figure 4 : Models and dataset details

2. User Flow & Navigation

- **How does a user interact with the application from start to finish?**
 1. User get to know about the over view of the application.
 2. Enter the air pollutants and location information to estimate air quality index.
 3. Can view recently estimated results.
 4. Get to know about the dataset and the models used to train the model.
- **Describe key user interactions and navigation flow.**
 - User can estimate air quality index of some cities in india.
- **Was a user flow diagram created? If yes, attach it.**

3. Design Principles & Aesthetics

- **What design principles were followed? (e.g., minimalism, material design, consistency in color and typography)**
 - No, design principles were followed, instead using default streamlit minimalistic UI.
- **How does the visual design enhance usability?**
 - Visual design plays an important role in improving usability by making an interface simple and well structured.
 - A well designed UI ensures that users can accomplish tasks efficiently and with minimal effort.

4. Responsiveness & Cross-Platform Compatibility

- **Is the application responsive across different devices (mobile, tablet, desktop)?**
 - Yes, but with limitations! Streamlit apps are partially responsive by default, but they may not always be fully optimized for mobile screens or different device sizes.

- **Did you test UI consistency across different screen sizes?**
 - No, I haven't test it on different screen size, because the streamlit application by default responsive and support wide range of devices as it run on web browser
 - **Were any frameworks (e.g., Bootstrap, Tailwind CSS) used for responsiveness?**
 - No, only streamlit was used to developed the user interface.
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5. User Accessibility & Inclusivity

- **What accessibility considerations were implemented?**
 - It is accessible by everyone and no much time was spent on this.
 - **Did you incorporate any accessibility guidelines (e.g., WCAG standards, ARIA roles)?**
 - No
 - **How does the application cater to users with disabilities (e.g., color contrast, keyboard navigation, screen reader support)?**
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6. User Testing & Feedback

- **Was usability testing conducted? If yes, describe the process.**
 - **Did you gather user feedback? If yes, what improvements were made based on the feedback?**
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7. UI/UX Challenges & Solutions

- **What were the biggest UI/UX challenges faced?**
 - Choosing images
 - Lack of knowledge of UI/UX
 - **How did your team address them?**
 - Referred to streamlit documentation for functionality implementation.
 - Chosen publicly available images from google
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8. Supporting Screenshots & References (If applicable)

- **Provide links to design inspirations or references used in the UI/UX process.**

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