

Software Engineering - IT314

LAB III

GROUP 32

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Project : Air Quality Platform

Problem statement: Design a platform which collects toxic substance data and allows virtually any user easy access to their overall exposure levels of pollutants while providing the ability to drill down into specifics with context, resources, and analysis seamlessly integrated into visualizations.

- **Functional requirements**

- Search/filter pollutant information based on location
- Display Air Quality Index (AQI) by collecting data from APIs/scraping
- Showing AQI and other environmental factors on maps
- Display the overall exposure level of the user to pollutants along with details
- Do's, don'ts and other cautions based on AQI/pollution level/ any other criteria
- Visualizations for AQI/other criteria along with ability to filter them according to time periods/intervals

- **Non - functional requirements**

- Low latency - application loads quickly
- Accuracy in the data provided
- User anonymity remains with the exception of geographic data
- Simplistic user interface to ensure smooth onboarding of novice users
- Should work well with heavy data traffic
- Compatibility of the application with multiple browsers and devices

- **Domain requirements**

- Ability to access user's location
- Availability of enough data about pollutants in the requested location