

CLEAN AIR FORCASTER

A Web based Pollution Forcaster

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GOODALOCHANA

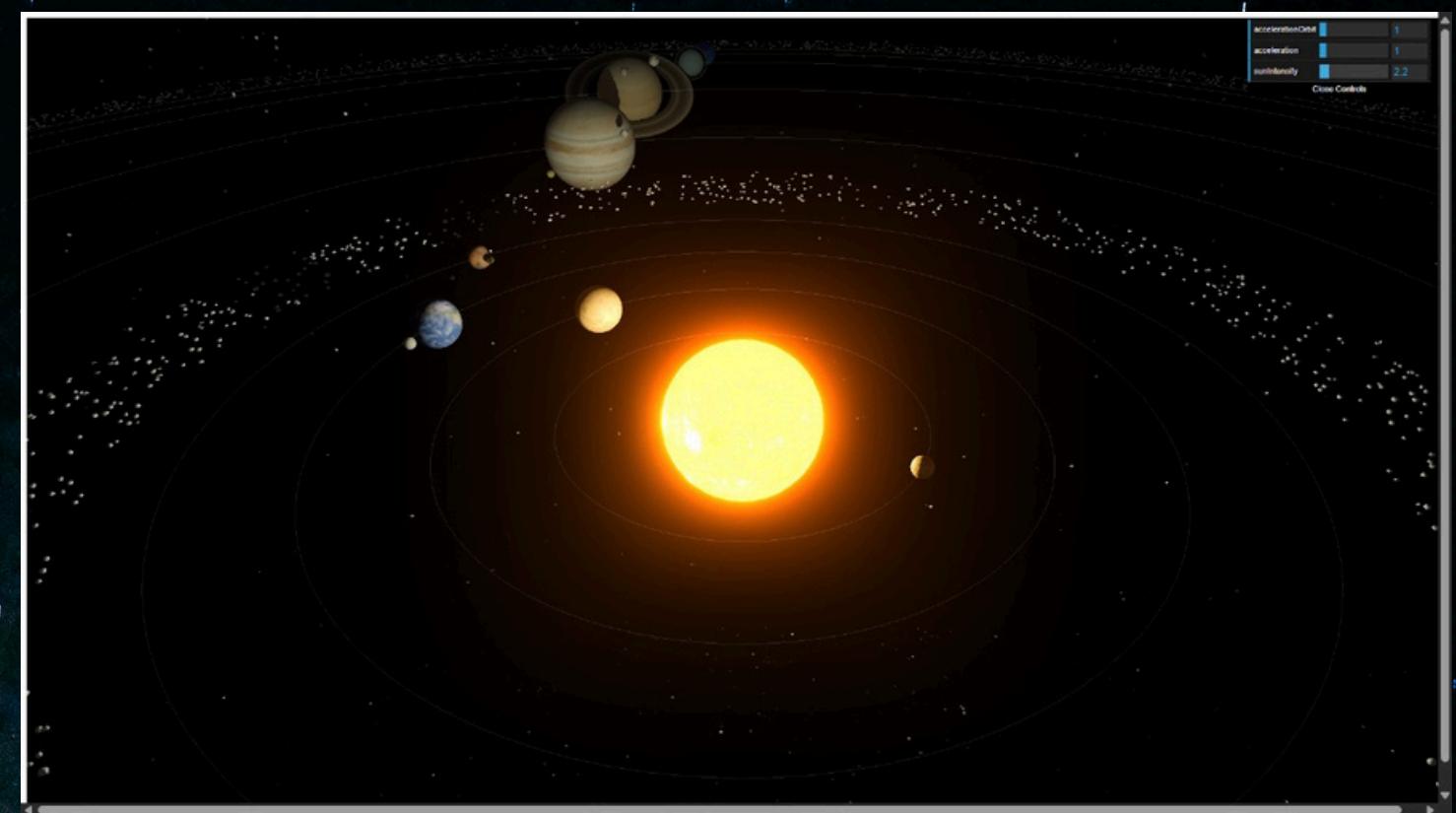
TEAM : GOODALOCHANA
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The Challenge We're Solving

Invisible Threat

Air pollution is a silent killer affecting millions globally. Without advance warning, people unknowingly expose themselves to harmful pollutants during outdoor activities, exercise, or daily commutes.

Current weather apps show *past* conditions, but lack predictive intelligence for future air quality —leaving communities vulnerable and unprepared.



How Our Platform Works



Data Collection

Real-time environmental data streams from MeteorMatics and WAPI APIs, capturing temperature and pollutant concentrations.



Machine Learning Analysis

Our ML model analyzes three months of historical patterns to identify pollution trends and correlations with weather conditions.



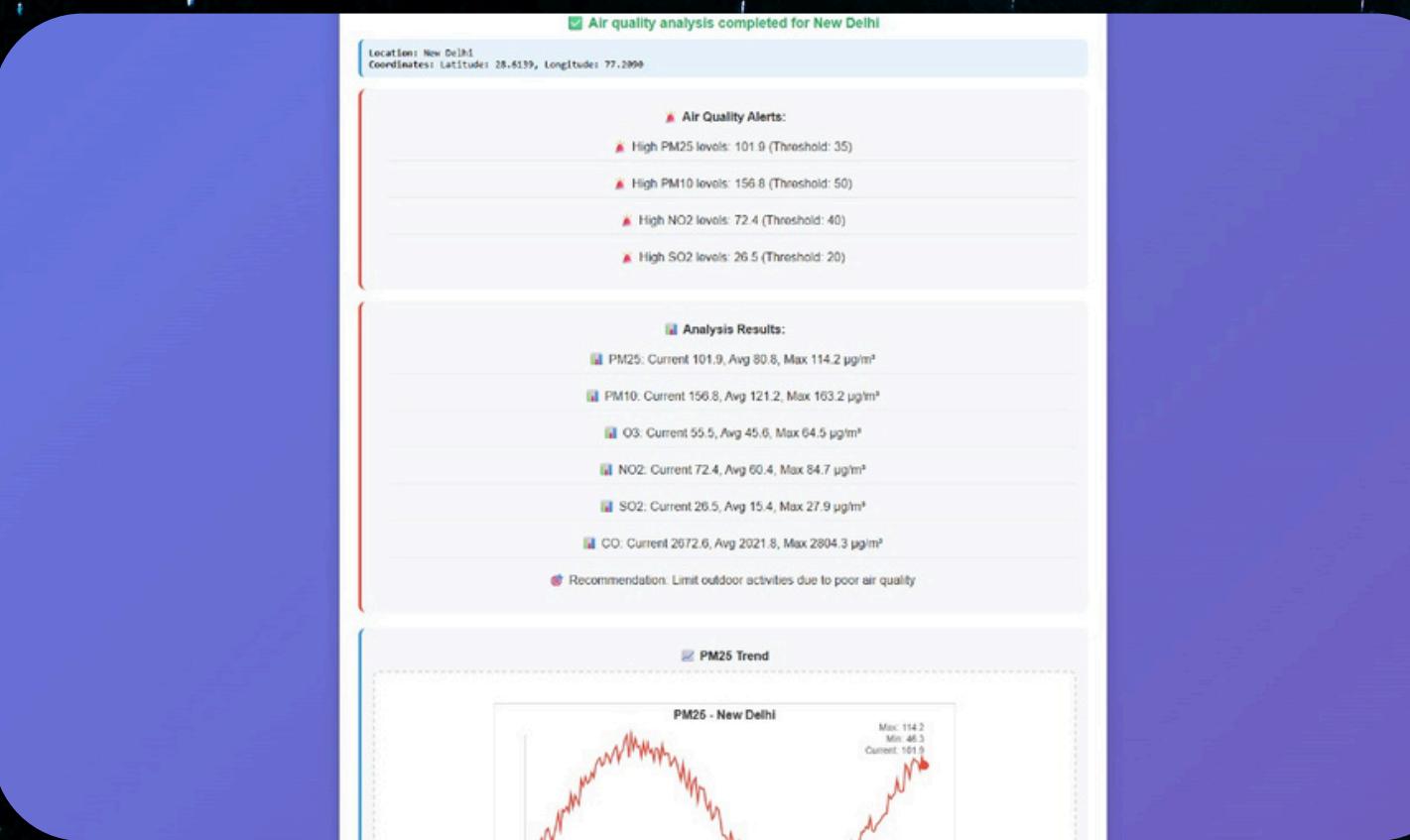
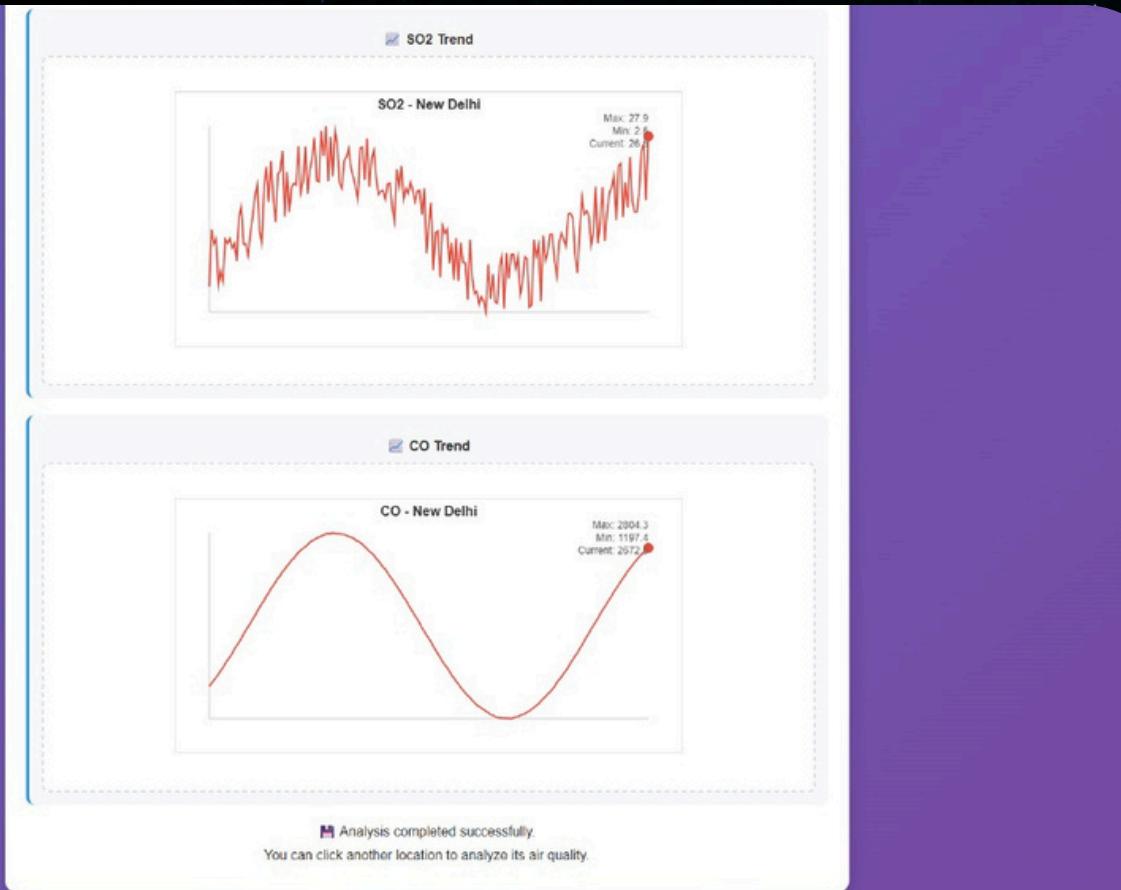
Location-Based Prediction

Users select their location and receive precise 24-hour air quality forecasts tailored to their specific area.

Smart Alerts

Instant notifications warn users when pollution levels are predicted to reach unsafe thresholds, enabling proactive health protection.

Technology Stack & Architecture



Backend Power

Flask & Python drive our prediction engine and API integrations



Frontend Experience

HTML, CSS, JavaScript create an intuitive, responsive interface



Interactive Elements

Three.js powers our engaging solar system educational quiz

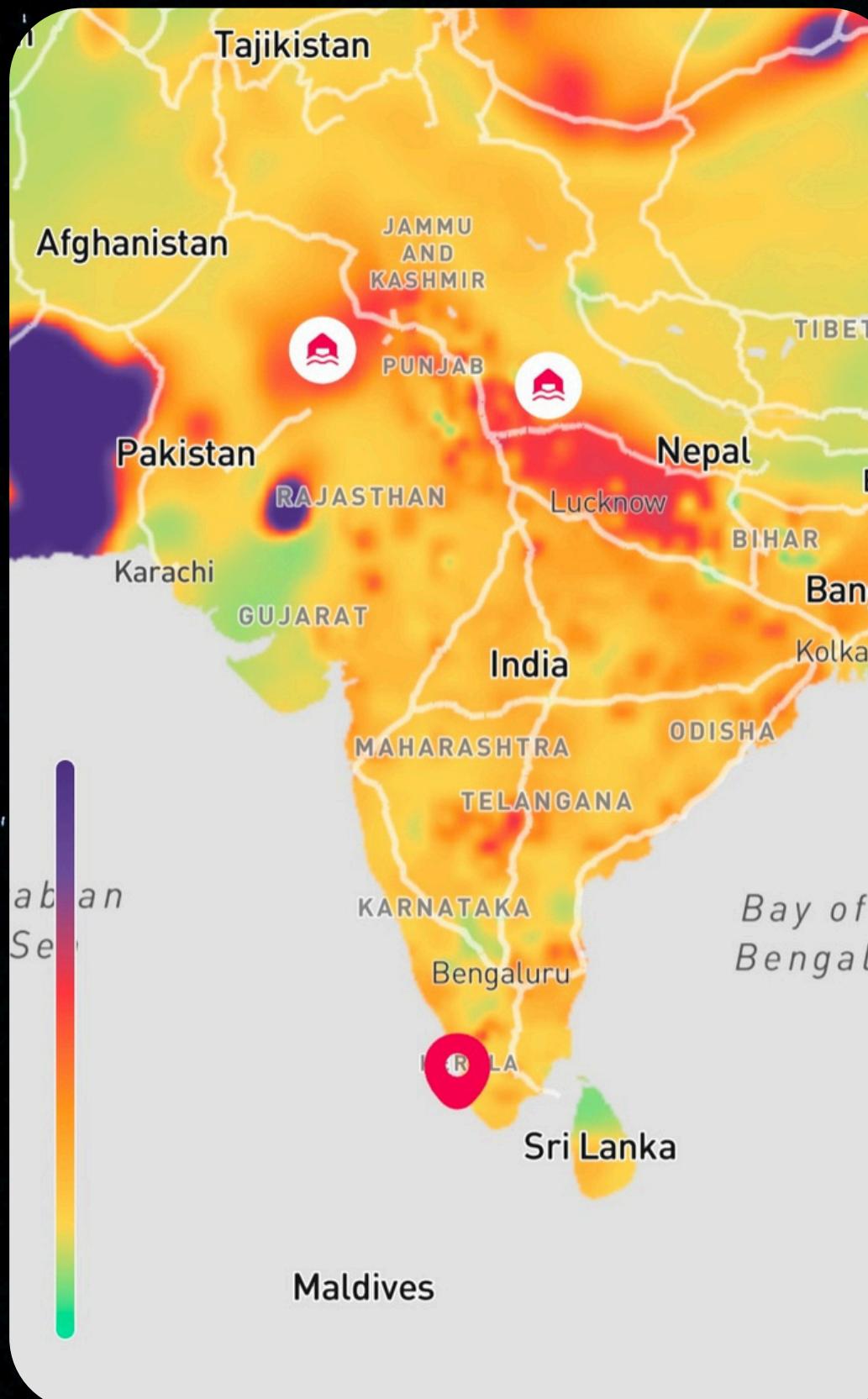


Real-Time APIs

MeteoRmatics & WAPI deliver continuous environmental data streams

Built in VS Code with emphasis on accuracy, speed, and user-friendliness—transforming complex environmental data into simple, life-saving insights.

Real-World Impact & Benefits



Health Protection

Early warnings enable users to avoid outdoor activities during hazardous air quality periods, reducing respiratory risks and pollution-related illnesses.

Informed Daily Planning

Users can schedule outdoor activities, exercise routines, and commutes around predicted safe air quality windows.

Universal Accessibility

Complex environmental science becomes actionable insights anyone can understand and use immediately.

Community Awareness

Promotes collective environmental responsibility and encourages behavior that supports cleaner, safer neighborhoods.

Beyond Prediction: Education Through Engagement

Solar System Quiz

We believe environmental awareness should be engaging and enjoyable. Our platform features an interactive solar system quiz built with Three.js that combines space science education with environmental learning.

This gamified approach helps users—especially younger audiences—develop a deeper appreciation for Earth's atmosphere and the importance of protecting our planet's air quality.

24hr Forecast Window
Advance prediction time
3mo Training Data
Historical analysis depth



Additional work for Rainfall prediction



Building a Healthier Tomorrow



Predict

24-hour air quality forecasts using advanced ML algorithms

Alert

Instant warnings for unsafe pollution conditions



Protect

Empower communities to make health-conscious decisions



Inspire

Drive environmental responsibility and cleaner communities

Our vision: A world where everyone has access to predictive air quality intelligence, enabling healthier lives and inspiring collective action toward cleaner environments. By making pollution data accessible, actionable, and engaging, we're not just predicting air quality—we're empowering communities to breathe safer.