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HACK4DELHI

Pitch Directly to the Government. Build for the Nation.

Team Name : NeuralX
(Track:Governnence
/Civic Tech)

Members name and Affiliation:

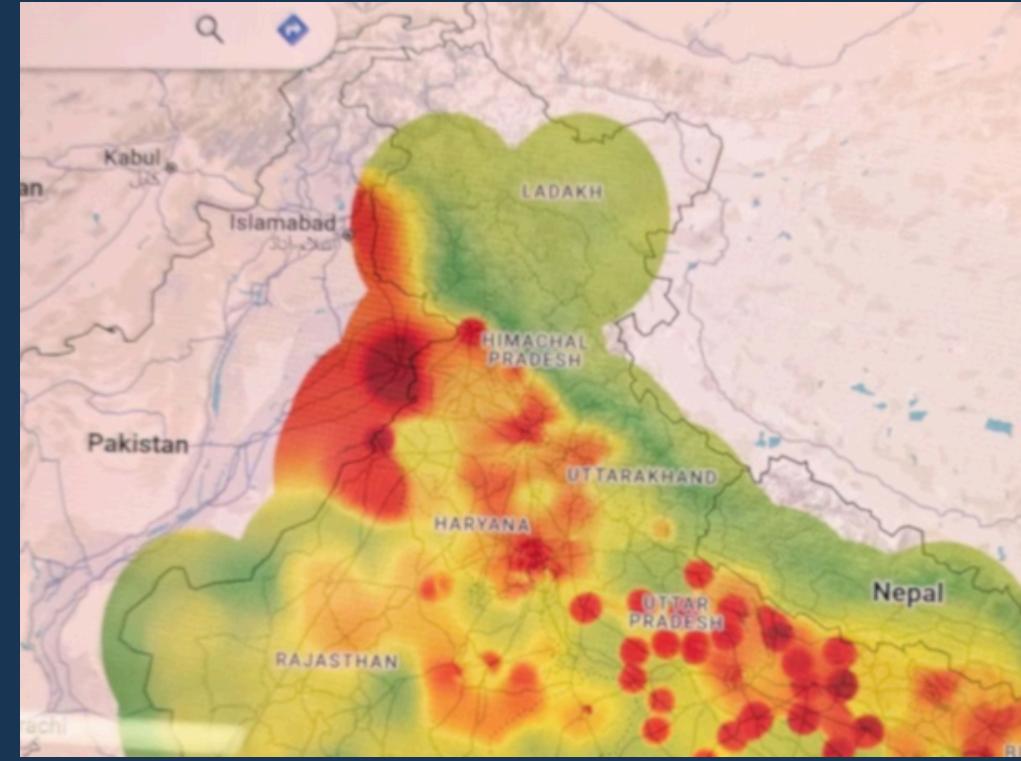
ANKUR-UIET MDU
RAKSHA-WCTM GURUGRAM
RONAK-UIET MDU
MUSKAN KUMARI-UIET MDU
AREEBA KULSUM-DITM FARIDABAD

PROBLEM STATEMENT



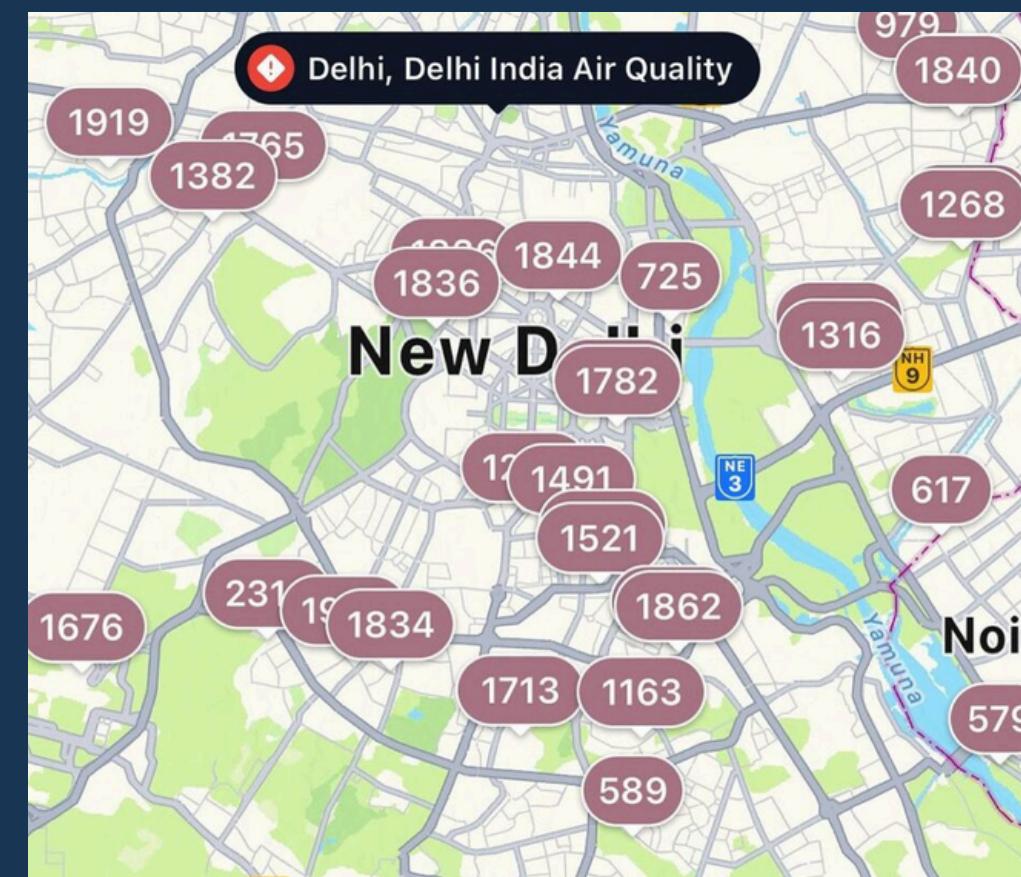
Real-World Challenge

- **Urban pollution data is mostly city-level or zone-level**
- **Pollution sources vary ward to ward**
- **One-size-fits-all policies fail at local execution**



Existing Gaps

- **No real-time ward-wise visibility**
- **Citizens lack localized awareness**
- **Authorities lack action-priority insights**
- **Data exists, but not decision-ready**



Why This Matters

- **Delayed action increases health risks**
- **Poor targeting wastes administrative effort**
- **Lack of transparency reduces public trust**



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SOLUTION

Ward-Wise Pollution Action Dashboard

○ Our Approach

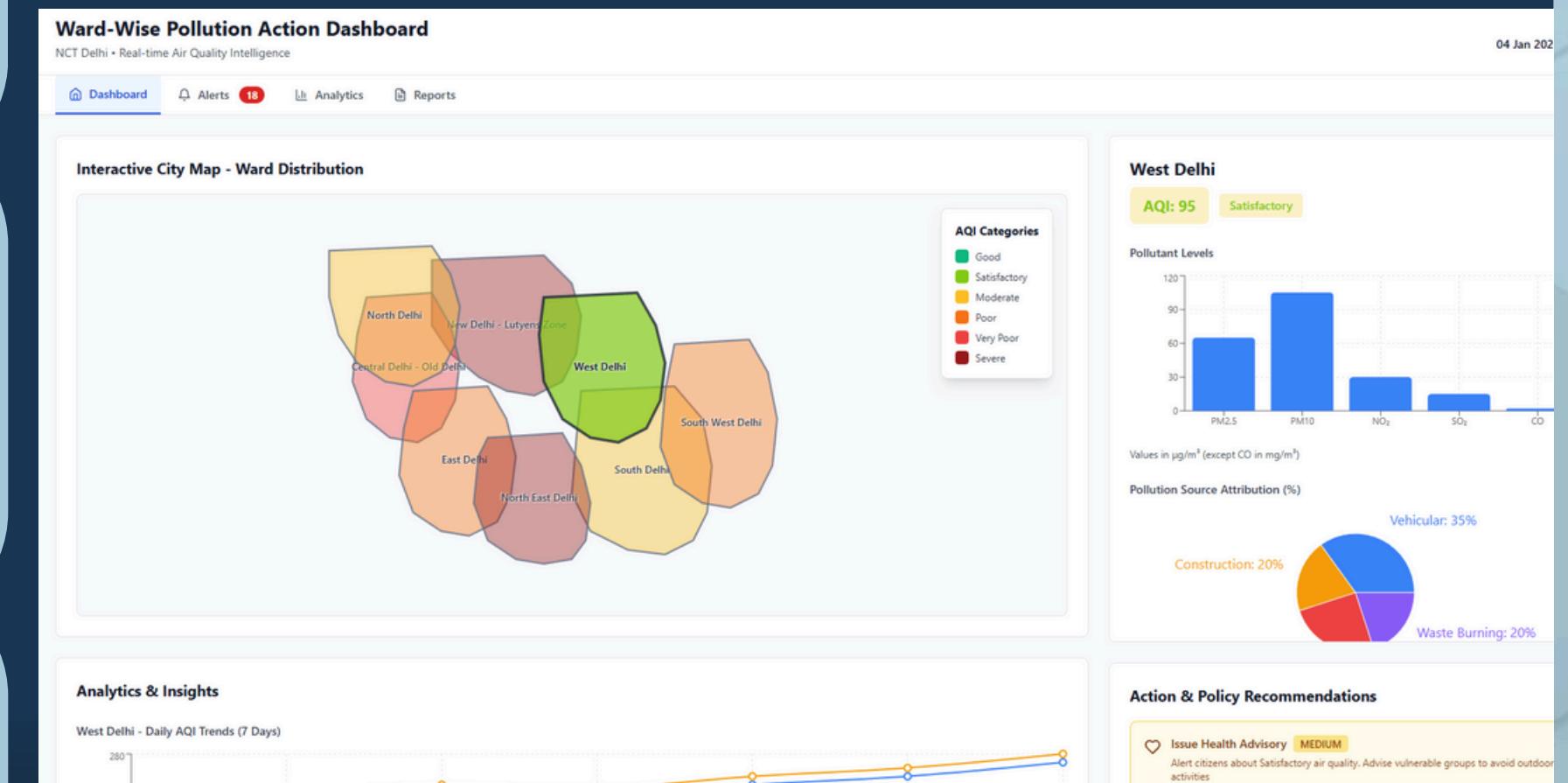
- Aggregate pollution, traffic, weather, and citizen data
- Analyze at ward granularity
- Convert data into clear actions

○ What the Solution Delivers

- Real-time ward pollution status
- Source-wise pollution attribution
- Citizen alerts & advisories
- Authority-focused action recommendations

○ Why This Stands Out

- Ward-first design (not city-first)
- Action-oriented, not data-heavy
- Built for both citizens & government





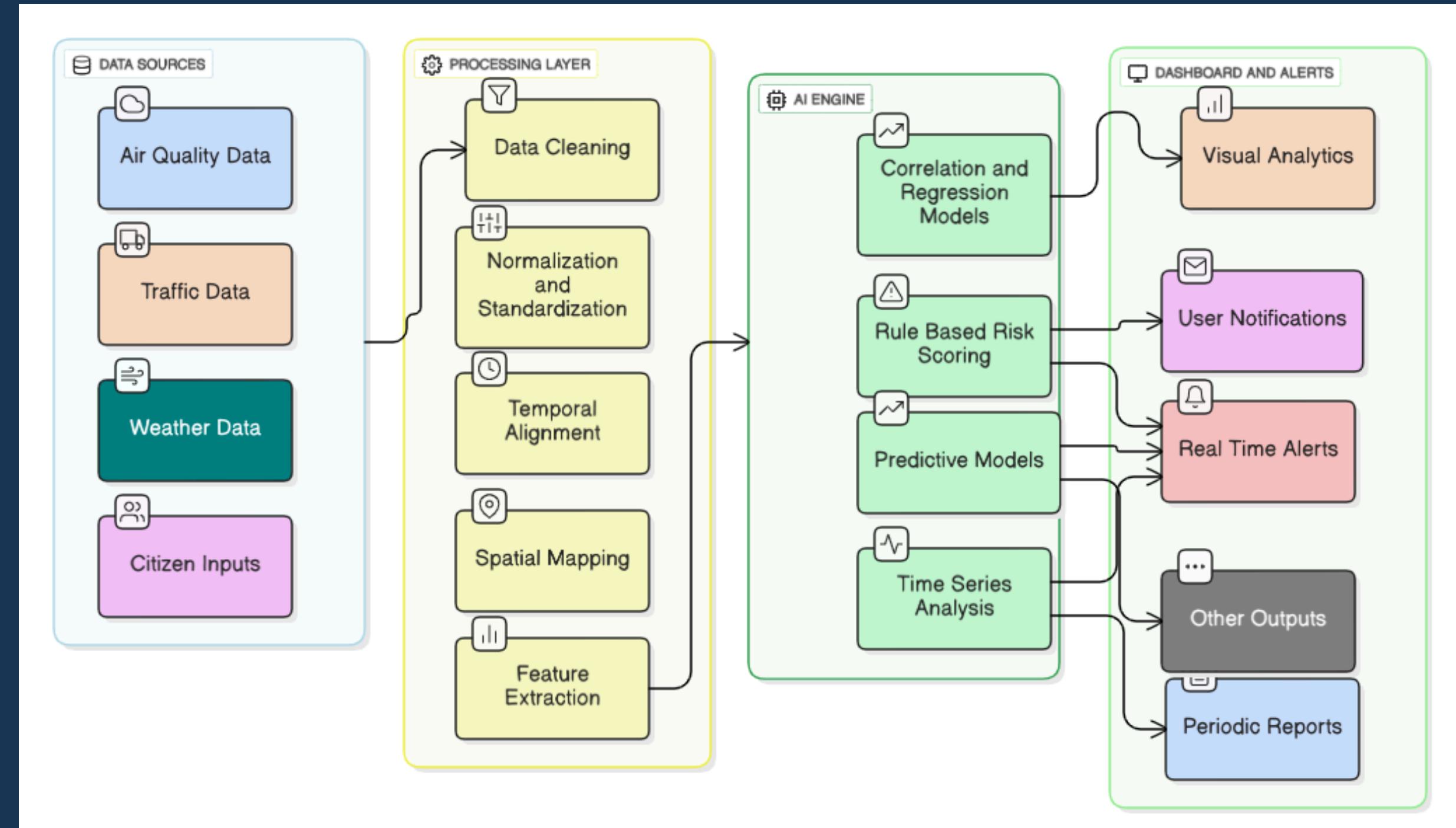
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ARCHITECTURE

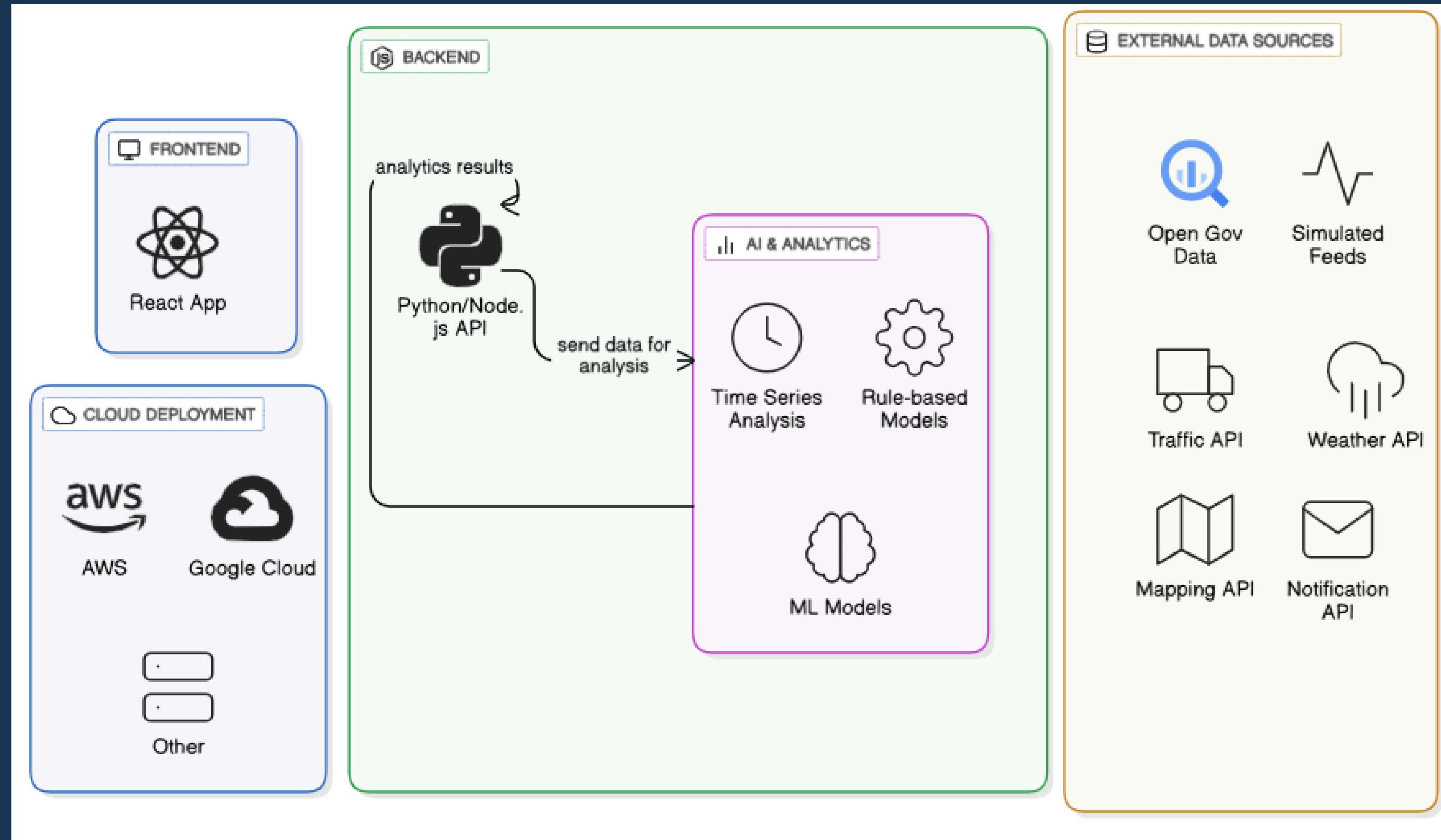
System Architecture & Data Flow

- Multi-source data ingestion (AQI, traffic, weather)
- Preprocessing & normalization
- AI-based pattern & risk analysis
- Role-based dashboard delivery
 - Data Ingestion Layer
 - AI & Analytics Engine
 - Visualization & Alert Module





TECHNOLOGY USED





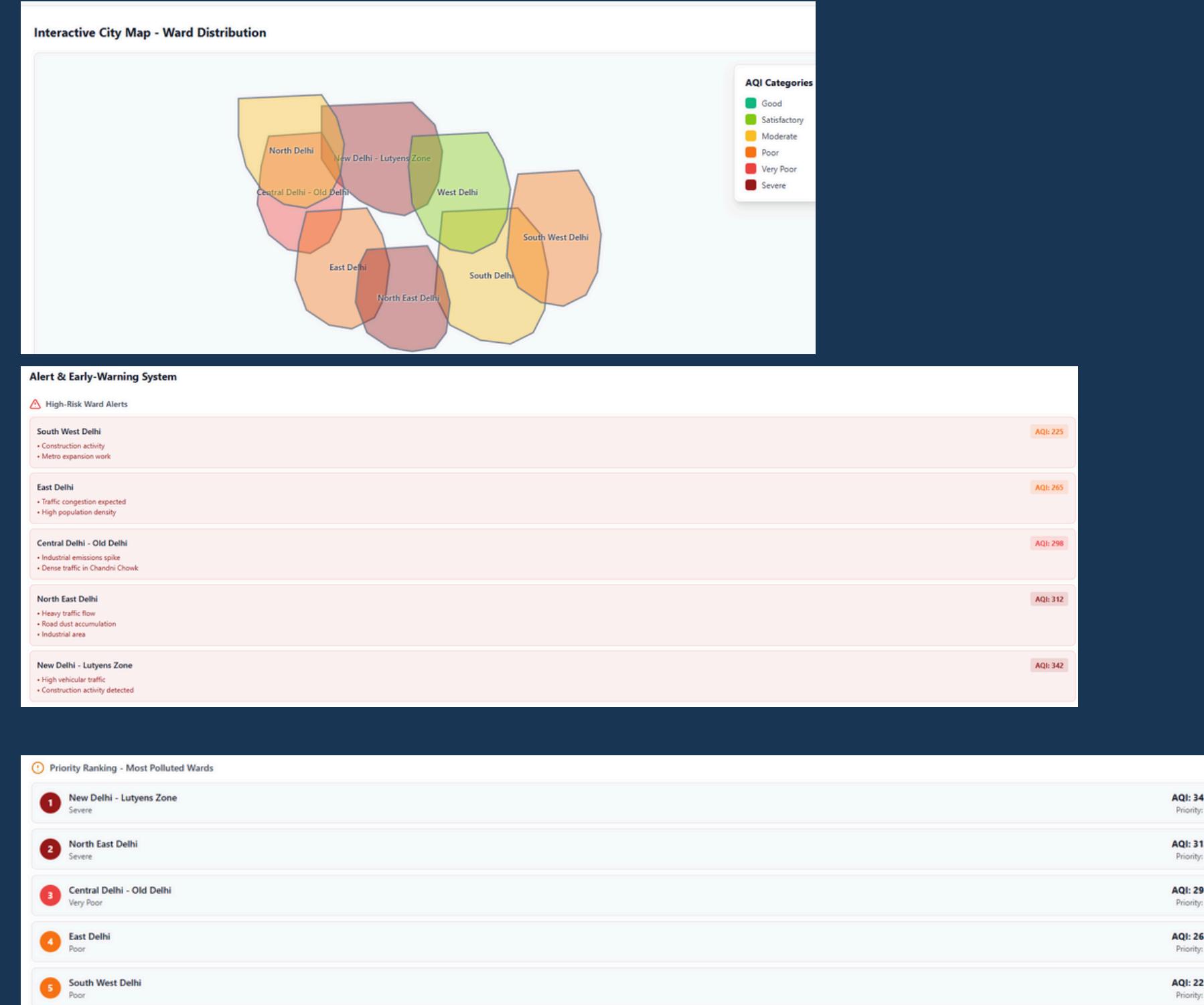
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FEATURE/USP

Key Features & Unique Strengths

- **Core Features**
 - **Ward-wise pollution heatmap**
 - **Source attribution (traffic, construction, weather)**
 - **Predictive pollution alerts**
 - **Citizen-friendly health advisories**
- **Unique Selling Points (USP)**
 - **Ward-level governance focus**
 - **Dual-interface (citizen + authority)**
 - **Action-priority ranking**
 - **Low-cost, scalable architecture**





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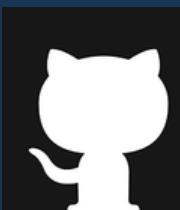


REFERENCES/LINKS



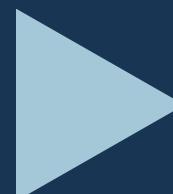
Content

- CPCB AQI Data – <https://app.cpcbCCR.com>
- OpenAQ Platform – <https://openaq.org>
- OpenWeather API – <https://openweathermap.org/api>
- OpenStreetMap – <https://www.openstreetmap.org>
- IEEE Xplore & Google Scholar (Research Papers)



GitHub Repository link

- <https://github.com/ANKUR172006/WARD-POLLUTION-DASHBOARD>



Demo Video

- https://drive.google.com/file/d/119GhUVHadu52MViLpw4_4rv3ftjiY5MQ/view?usp=drivesdk



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THANK YOU