

# Corruption Complaint Management Portal with Data Analytics Powered By Blockchain

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# Problem Statement

“In the first half of 2025, citizens in Bengaluru alone filed 126,974 civic complaints—that’s over 750 complaints every single day about infrastructure issues like roads and drainage.”

“Mumbai received 6,231 pothole-related complaints during a single monsoon season in 2024, with officials struggling to keep up even after ambitious repair claims.”

Corruption costs organizations about 5% of annual revenue worldwide, fueled by a lack of transparency, accountability, and visibility in complaint systems. Citizens face slow, manual, and opaque processes that discourage reporting, weaken government efficiency, and erode public trust in governance.

# Proposed Solution

**Prajā-Netra** – An AI-driven platform designed to help citizens with transparent, secure, and accessible corruption reporting, backed by blockchain and advanced data analytics for accountability and governance transformation

## Key Concept:

**A Civic Tech Platform for Everyone:** This platform is designed to include everyone. It lets people report problems easily using voice, text or pictures, in whatever language they are most comfortable with.

**Understanding Many Types of Input:** The system can handle typed messages, voice notes and photos. It organises this information so that nothing is lost and every report can be clearly understood.

**Finding Patterns in Reports:** After comparing similar cases, the platform can spot connections and trends that might not be obvious at first. This helps to uncover larger issues and supports faster and fairer responses.

**Protecting Identities Automatically:** Personal details are removed from reports to keep whistleblowers safe. This happens automatically so that protection doesn't depend on the person making the report.

**Insights for Better Governance:** Officials can see all the information on one national dashboard and ask plain-language questions to get clear, real-time insights for decision-making.

**Built on Transparency:** Every step of the process is open and trackable. This builds public trust and strengthens the integrity of civic institutions.

# Innovative Features

- **Voice-to-text in Hindi, Marathi & more** – People can just speak in their own language, and the system writes it down instantly using AI(Whisper AI).
- **AI extracts complaint details automatically** – The system reads complaints and pulls out key facts like date, place, people involved, and seriousness.
- **Blockchain for secure records** – Every complaint is locked on blockchain so it can't be changed or erased, ensuring full transparency.
- **Anonymous voting on priorities** – Citizens can vote on which complaints matter most, without revealing their identity.

# Methodology

- **Simple Complaint Submission:** Citizens can share their complaints in the easiest way possible—by speaking, typing, or just uploading a photo. They don't need to worry about literacy, technical know-how, or even the language they use, because the platform understands regional languages and different input styles.
- **Smart AI Processing:** Once a complaint is sent, the system steps in to sort and process it automatically. It can read images, highlight the key details, and even hide personal information so that whistleblowers stay safe and anonymous.
- **Finding Patterns & Links:** The platform doesn't just stop at one complaint. It compares each case with older records to spot trends, find repeated incidents, and reveal bigger corruption networks that might otherwise go unnoticed.
- **Actionable Dashboards:** Authorities get access to all this processed information in a simple dashboard. They don't need technical expertise—just plain questions like, “Show all bribery cases in the transport department this month,” and the system instantly gives them clear, ready-to-use insights.



## AI Tools Used in the Project :

- **Whisper API:** Converts voice complaints in regional languages (Hindi, Marathi, etc.) into text.
- **GPT-4o:** Reads raw complaints and extracts crucial details like date, location, officials, type of corruption, and severity.
- **Custom-Trained LLM:** Allows natural language queries so decision-makers can ask, “Which departments received the most complaints in the last 3 months?” and get immediate answers.

# Impact and Benefits

## For Citizens of India 🧑🏻♀️

- **Bridges the Digital and Linguistic Divide:** Allows all citizens, be it urban or rural, to report issues in their own local languages.
- **Universalizes Whistleblower Protection:** Provides a secure and anonymous manner in which to report wrongdoing for all citizens.
- **Deepens Democratic Participation:** Strengthens democracy by increasing citizen participation and trust in government.

## For Governing Authorities 🏛️

- **Enables Data-Driven Policy:** Provides a national dashboard that has real-time trending across states to help inform policy.
- **Uncovers Corruption Networks:** Uses AI to identify complex, inter-state patterns and networks of corruption that are not visible to the naked eye.
- **Improves Welfare Scheme Delivery:** Guarantees that national welfare funds are delivered to the intended beneficiaries by identifying and plugging systemic leaks.

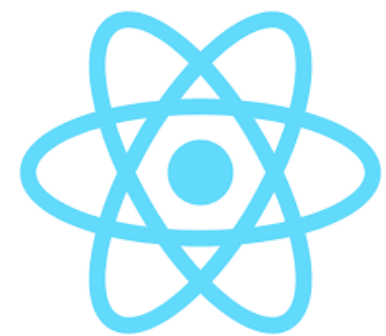
## For India as a Nation ✨

- **Enhances International Standing:** Boosts India's rank on the Corruption Perception Index, showing potential investors that it is safe to invest in India.
- **Stimulates Economic Growth:** Guarantees that public funds are used efficiently to support national development, ie GDP growth.
- **Promotes Inclusive Development:** Promotes equitable growth by eradicating corruption, which is one of the greatest drivers of inequality for marginalized groups.



# Tech Stack

 **FastAPI**



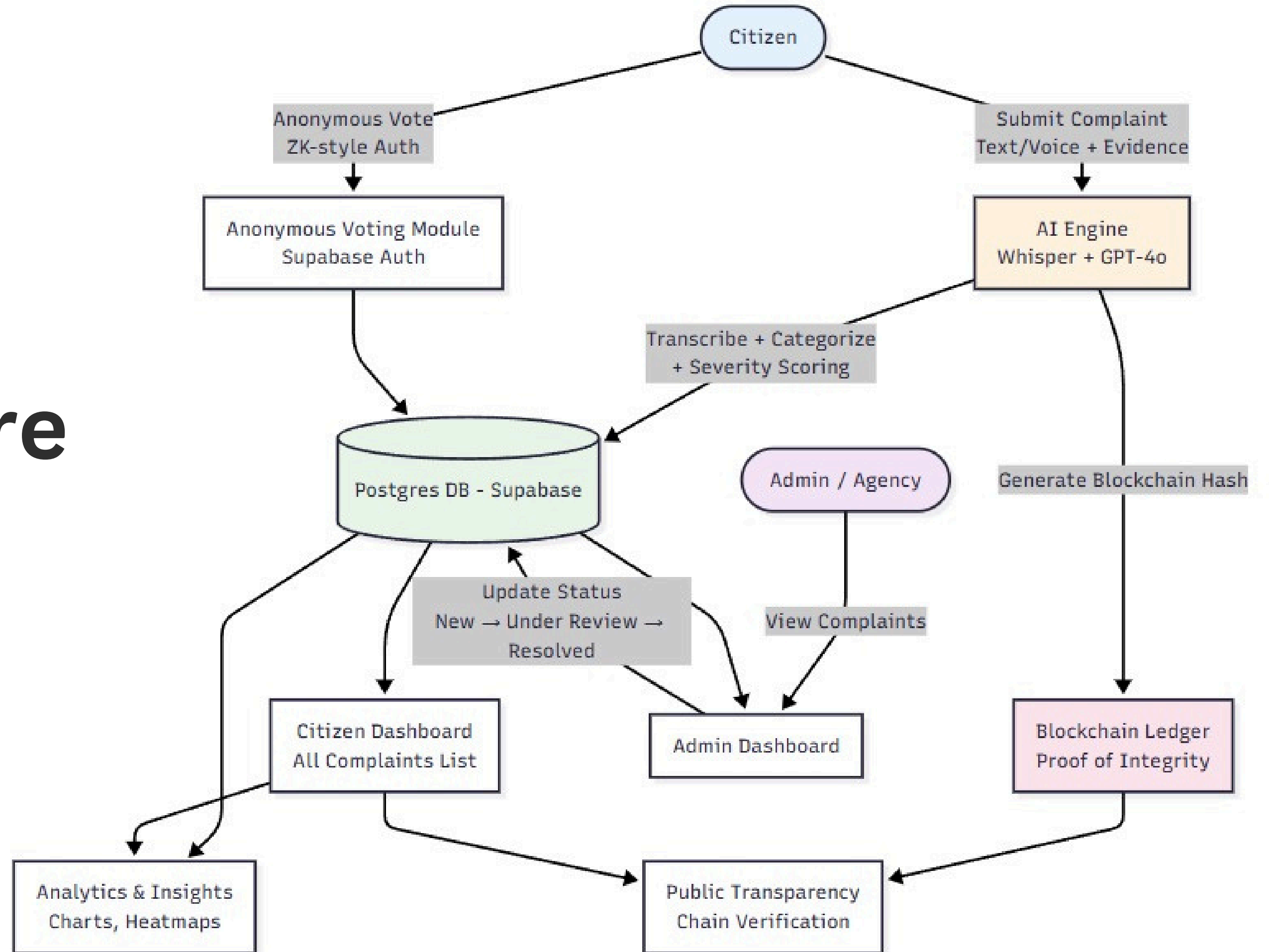
 **OpenAI**

 **supabase**



- **Frontend:** React + Vite + TailwindCSS, Axios/React Query, Leaflet/Mapbox (maps & heatmaps)
- **Backend:** FastAPI (Python), PostgreSQL (Supabase), SQLAlchemy + Alembic
- **AI:** Whisper (speech-to-text), GPT-4o (OpenAI API) (categorization & priority)
- **Blockchain:** Ethereum/Polygon (smart contracts), Solidity, zk-SNARKs (ZK voting), Ethers.js & Web3.py
- **Auth:** Supabase Auth (citizen/admin login)
- **Deployment:** Docker, Vercel (frontend), Render (backend), Supabase (DB/Auth), Polygon Mumbai Testnet

# System Architecture





# Future Scope

- **Integration with Government Systems** – Connect with police, anti-corruption bureaus, and judiciary for faster action in live time.
- **Mobile App Deployment** – Launch Android/iOS apps for greater accessibility.
- **Add More Local & Global Languages** – Ensure inclusivity for all citizens regardless of language .
- **Global Anti-Corruption Network** – Share insights across countries for international cooperation.