Citizen AI: Intelligent Citizen Engagemenrt Platform

Project Documentation

1. Introduction

Project Title: Citizen AI: Intelligent Citizen Engagemenrt Platform

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2. Project Overview

- Purpose:

Citizen AI is designed to improve governance and community engagement by providing citizens with an accessible platform to interact with government policies, services, and updates. It leveragesAItodeliveraccurateinformation,summarizedocuments,collectcitizenfeedback,and assist officials in decision-making. The system empowers both citizens and authorities by ensuring transparency, inclusivity, and real-time communication.

- Features:

Conversational Interface

KeyPoint:NaturallanguageQ&A

Functionality:Citizen scan ask question sabout policies,schemes,or services and receive AI-powered responses.

PolicySummarization

KeyPoint:Simplified understanding

Functionality:Convertslengthydocumentsintoconcise summaries.

Citizen Feedback Collection

Key Point:Community engagement

Functionality: Collects opinions and suggestions from citizens for governance improvements.

Service Recommendation

Key Point: Personalized assistance

Functionality: Suggests government schemes and services based on user profile.

Data Analytics for Officials

Key Point: Informed decisions

Functionality: Provides insights from citizen feedback and queries.

Multimodal Support

Key Point: Flexible inputs

Functionality: Accepts text, PDFs, and voice queries.

User-Friendly Dashboard

Key Point: Accessibility

Functionality: Intuitive design for both citizens and government officials.

3. Architecture

Frontend(Streamlit/React): Interactivedash boardwithchat,documentupload,and visualization panels.

Backend (FastAPI): API-driven backend for chat, feedback collection, and report generation.

LLMIntegration:A Imodel fornatural language processing,summarization,andrecommendations.

Vector Database (Pinecone/FAISS): Stores embedded documents for semantic search.

AnalyticsModule:Processescitizenfeedbackandgeneratesvisualreportsfor policymakers.

4. Setup Instructions

Prerequisites:

- Python3.9+
- Virtual environment setup
- API keys for AI/Vector DB services
- Internet connection

Installation Steps:

1. Clone repository

2. Install dependencies from requirements.txt

3. Configure.env with credentials

4. Run backend server (uvicorn)

5. Launch frontend(streamlitrunapp.py)

6. Interact with chatbot, upload docs, and view analytics

5. Folder Structure

```
Citizen_ai/
│ ──app/                #Backend API(FastAPI)
│  ├── routes/            #API routes(chat, feedback, reports)
│  ├── models/            #Data models
│  └── services/          #Business logic
│
│ ──ui/                 #Frontend(Streamlit)
│  ├── pages/             # Dashboard pages
│  └── components/        # UI components
│
│ ── embeddings/         #Document embeddings storage
│ ──analytics/           #Data processing& reports
│ ── main.py             #Entry point for backend
│ ── dashboard.py        # Entry point for frontend
```

6. Running the Application

1. Start FastAPI backend.

2. Run Streamlit dashboard.

3. Upload documents or submit queries.

4. View AI-generated summaries, reports, and citizen feedback analytics.

7. API Documentation

POST/chat/ask → Query the AI assistant

POST/upload-doc →Upload policy or scheme document

GET /search-docs → Search relevant documents

GET/recommend-service →Get suggested schemes

POST /submit-feedback → Store citizen feedback

8. Authentication

Token-based authentication(JWT/API keys)
Role-based access: Citizen, Official, Admin

Future scope: OAuth2 integration with government digital IDs

9. User Interface

Sidebar navigation

Chat window for Q&A

Policy/document summarization tab

Feedback form

Analytics dashboard with visual charts

Downloadable reports

10. Testing

Unit Testing: Core AI functions & utilities

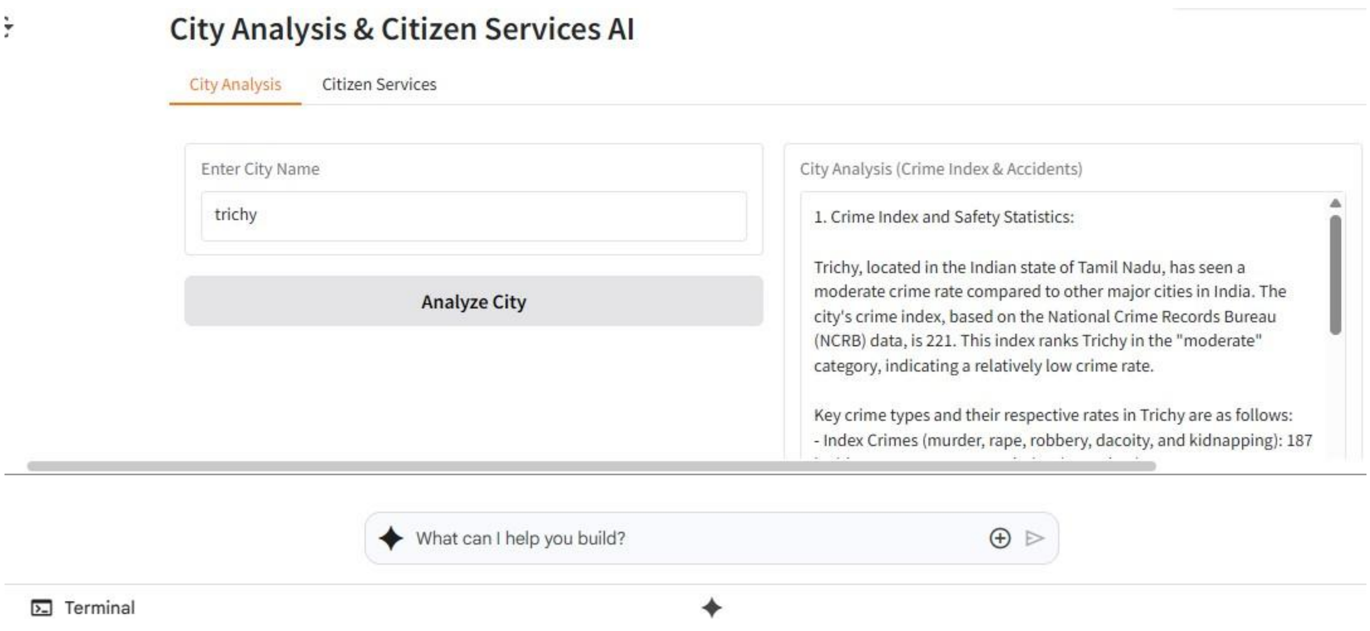
API Testing: Postman & Swagger UI

Manual Testing: User interactions & document handling

Edge Cases: Malformed input, large documents, invalid keys

11. Screenshots:

SCREENSHOT1:


City Analysis & Citizen Services AI
City Analysis
Citizen Services
Analyze City
What can I help you build?
Terminal

Enter City Name

trichy

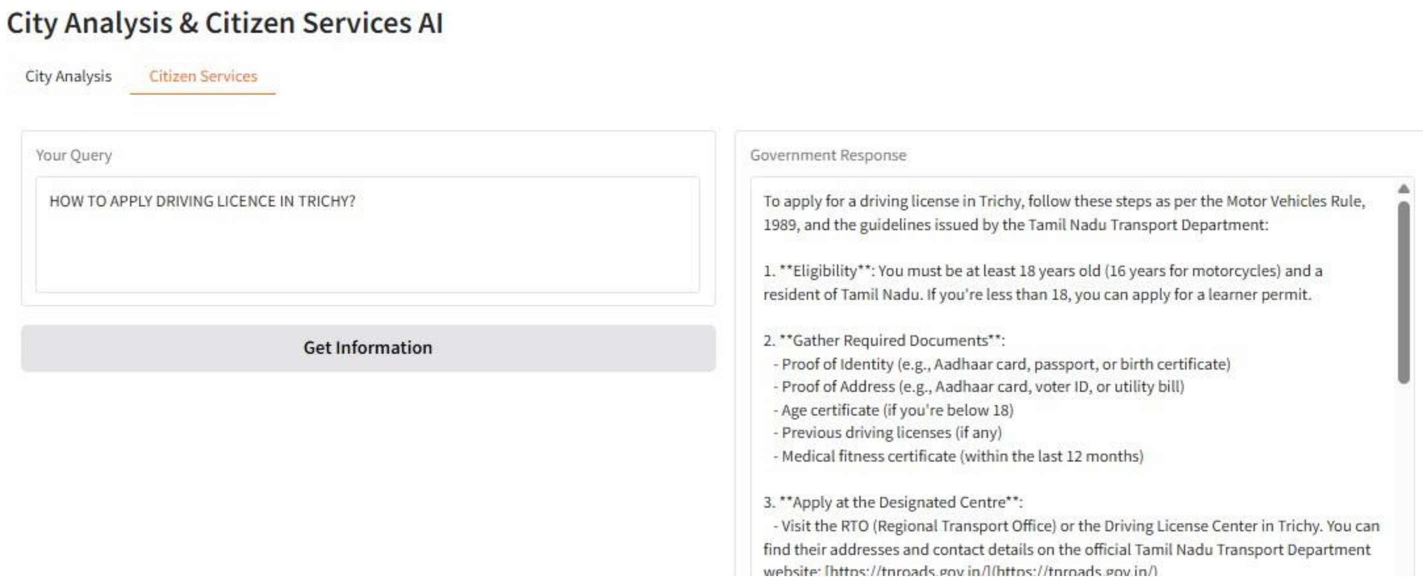
City Analysis (Crime Index & Accidents)

1. Crime Index and Safety Statistics:

Trichy, located in the Indian state of Tamil Nadu, has seen a moderate crime rate compared to other major cities in India. The city's crime index, based on the National Crime Records Bureau (NCRB) data, is 221. This index ranks Trichy in the "moderate" category, indicating a relatively low crime rate.

Key crime types and their respective rates in Trichy are as follows:
- Index Crimes (murder, rape, robbery, dacoity, and kidnapping): 187

SCREENSHOT2:



Your Query

HOW TO APPLY DRIVING LICENCE IN TRICHY?

Government Response

To apply for a driving license in Trichy, follow these steps as per the Motor Vehicles Rule, 1989, and the guidelines issued by the Tamil Nadu Transport Department:

1. **Eligibility**: You must be at least 18 years old (16 years for motorcycles) and a resident of Tamil Nadu. If you're less than 18, you can apply for a learner permit.

2. **Gather Required Documents**:
 - Proof of Identity (e.g., Aadhaar card, passport, or birth certificate)
 - Proof of Address (e.g., Aadhaar card, voter ID, or utility bill)
 - Age certificate (if you're below 18)
 - Previous driving licenses (if any)
 - Medical fitness certificate (within the last 12 months)

3. **Apply at the Designated Centre**:
 - Visit the RTO (Regional Transport Office) or the Driving License Center in Trichy. You can find their addresses and contact details on the official Tamil Nadu Transport Department website: https://tnroads.gov.in/

12. Known Issues

Limited support for regional languages (plannedenhancement)

Requires stable internet connection

Large document embedding may slow response

13. Future Enhancements

Multilingual support

Mobile app integration

Voice-based interaction

Block chain-enabled feedback transparency

Predictive analytics for policy planning