CitizenAI Project Documentation

1. Introduction
Project Title: CitizenAI – City Analysis & Public Services

Team ID : NM2025TMID03832
Team Size : 4
Team Leader : ASHWIN KUMAR A
Team member : BLESSAN VASS Y
Team member : ELANGO M
Team member : GOKUL G

2. Project Overview
CitizenAI is designed to help citizens and government bodies by providing:
- City Analysis: Crime index, accident rates, and overall safety details.
- Citizen Services: Answers to queries about government policies, schemes, and civic services.

Key Features:

1. Conversational AI interface
2. Reliable insights using IBM Granite model
3. Easy-to-use Gradio web application
3. Architecture
- Frontend: Gradio interface with two tabs – City Analysis & Citizen Services.
- Backend: Python with Transformers + PyTorch.
- Model: ibm-granite/granite-3.2-2b-instruct (optimized for question answering).
- Deployment: Runs on Google Colab with T4 GPU.
4. Setup Instructions
Prerequisites:
- Python 3.9+
- pip installed
- Google Colab with T4 GPU

Steps to Run:
1. Install dependencies:
   pip install transformers torch gradio -q
2. Load the model and tokenizer.
3. Run the Python script.
4. Launch the Gradio app and use it via share link.

5. Folder Structure
citizenAI/
- app.py   # Main application file
- requirements.txt   # Dependencies
- README.md   # Documentation
- /screenshots/   # Screenshots of the app

6. Running the Application
1. Open Google Colab.
2. Change runtime to T4 GPU.
3. Install dependencies.
4. Run the script.
5. Access the Gradio interface with two tabs:
   - City Analysis
   - Citizen Services

7. API
- POST /city-analysis → Input city name → Returns safety analysis.
- POST /citizen-query → Input query → Returns AI response about services/policies.

8. Authentication
- Current demo runs in open mode.
- Future enhancements:
   • Token-based authentication (JWT/API keys)
   • Role-based access (citizen, admin, researcher)

9. User Interface
- City Analysis Tab: Enter a city name → Get safety insights.
- Citizen Services Tab: Enter a query → Get government service info.
10. Testing
- Unit Testing: For prompt handling and model responses.
- Manual Testing: Checked inputs and responses via Gradio.
- Edge Cases: Invalid/empty queries tested.
11. Screenshots

🏙️ CitizenAI – City Analysis & Public Services

City Analysis   Citizen Services

Enter City Name

mumbai

Analyze City

City Analysis

- Property crimes: burglary, theft, and robbery are common, which targeting unsecured vehicles and public spaces.
  - Sexual crimes: Mumbai has reported incidents of sexual assault, harassment, and molestation, which has led to stricter laws and increased public awareness.
  - Traffic-related crimes: Encroachment on roads and lack of adherence to traffic rules contribute to road accidents and traffic violations.
  - Organized crime: Syndicates involved in drug trafficking, extortion, and other illicit activities pose a significant threat.

2. Accident Rates:
  Mumbai suffers from high accident rates due to its dense traffic, poor road conditions, and lack of strict enforcement of traffic rules. Here are some key statistics:
  - Road fatalities: Approximately 5,000 people lose their lives annually on Mumbai's roads, making it one of the deadliest cities for road accidents. This equates to around 13 deaths per day.
  - Road injuries: Over 100,000 people are injured annually, with severe and long-lasting impacts on their lives

CitizenAI – City Analysis & Public Services

City Analysis   Citizen Services

Your Query

what are the steps to get an driving license

Get Info

Response

To obtain a driving license in the United States, follow these general steps. Please note that requirements may vary slightly by state, so it's essential to check your local Department of Motor Vehicles (DMV) guidelines for the most accurate information.

1. **Meet Eligibility Requirements:**
   - You must be at least 16 years old (15 with a permit in some states) to apply for a learner's permit and 18 to drive unrestricted.
   - Hold a valid United States permanent resident card (green card) or a valid driver's license from your home country if you're not a U.S. citizen.

2. **Obtain a Learner's Permit (if not already issued):**
   - Pass the written knowledge test at your local DMV.

12. Known Issues

- Model outputs depend on training data.

- Requires internet for model loading.

- No charts or maps yet (only text).

13. Future Enhancements

- Integrate real government APIs.

- Add data visualization (graphs, heatmaps).

- Multilingual support.

- Full-scale web app deployment.

14. Project Demo Video Link

https://drive.google.com/file/d/1qUnHmkgS6DqVimhOBN7ayKccnhySvf24/view?usp=drivesdk