

CitizenAI – Intelligent Citizen Engagement Platform

Generative AI with IBM – Project Report

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1.ABSTRACT:

This project presents CitizenAI – an Intelligent Citizen Engagement Platform designed to bridge the gap between citizens and government services. The system leverages IBM Granite AI, Hugging Face Transformers, and Gradio interface to provide quick, accessible answers about civic issues, government schemes, and public rights.

The primary goal of this project is to empower individuals to better engage with governance by receiving AI-driven insights, civic guidance, and feedback dashboards. It also tracks public sentiment and presents structured information to both citizens and officials. CitizenAI emphasizes responsible AI usage with disclaimers and directs users to verify with official government sources.

2.OBJECTIVES:

- To create an AI-powered citizen assistant with a simple UI.
- To answer questions about government schemes, services, and civic issues.
- To provide personalized civic suggestions based on demographics and needs.
- To generate sentiment dashboards for public officials.
- To ensure safe and reliable AI-driven recommendations.

3.SYSTEM REQUIREMENTS:

Software Requirements:

- Python 3.x
- Gradio
- Transformers
- Torch
- IBM Granite AI model

Hardware Requirements:

- Minimum 4GB RAM
- Dual-core processor
- Stable Internet connection

Deployment Requirements:

- Google Colab (T4 GPU) for low-cost, reliable execution.
- GitHub for version control and project storage.

4. PROJECT WORKFLOW

CitizenAI follows a modular workflow for extensibility and ease of deployment.

Workflow Steps:

1. Exploring Smart Interz Portal: Access project workspace via Naan Mudhalvan Smart Internz portal and review guided project resources.
2. Model Selection: Choose IBM Granite models from Hugging Face (e.g., granite-3.2-2b-instruct) for lightweight, fast performance.
3. Running Application in Google Colab: Configure runtime with T4 GPU, install dependencies (transformers, torch, gradio), and run the application.
4. Deployment: Launch Gradio-based interface, access the live app through shared links, and visualize outputs.
5. Version Control: Upload code and resources to GitHub for project management and future updates.

5.PROJECT FILES:

- .env – Stores API keys and configurations
- App.py – Main application file with Gradio blocks
- requirements.txt – List of required dependencies
- CitizenAI.ipynb – Google Colab notebook for model execution

6. APPENDIX: SOURCE CODE:

7.OUTPUT SCREENSHOT:

City Analysis & Citizen Services AI

City Analysis

Citizen Services

Enter City Name:

Chennai

Analyze City

City Analysis (Crime Index & Accidents)

1. Crime Index and Safety Statistics

Chennai, the capital city of Tamil Nadu, India, has seen a steady decline in crime rates over the past decade. According to the National Crime Records Bureau (NCRB), in 2019, Chennai reported 1,547 cases of crime per 100,000 inhabitants, which is lower than the national average of 2,285 for the same year. This indicates a relatively safer environment compared to many other urban centers in India.

--- "Crime Categories": The city's crime index varies across different categories. Property crimes, such as theft and burglary, are higher than violent crimes. Chennai has a lower rate of rape and murder compared to other major Indian cities. However, it still faces challenges in areas like cybercrime, e-commerce fraud, and street crime.

--- "Safety Measures": The city administration has implemented several safety measures, including the Chennai Metropolitan Police (CMP), and various community-based initiatives like the Chennai Crime Watch volunteer program. These efforts aim to enhance community policing, improve surveillance, and promote public awareness campaigns to prevent crime.

2. Accident Rates and Traffic Safety Information

Chennai, being a metropolitan city with increasing traffic density, has a higher-than-average accident rate. In 2020, the National Highway Authority of India (NHAI) reported 50,436 accidents in Tamil Nadu, with Chennai accounting for a significant portion of them.

City Analysis & Citizen Services AI

City Analysis

Citizen Services

Your Query:

How do I apply for a birth certificate?

Get Information

Government Procedure:

To apply for a birth certificate in the United States, you typically follow these steps. Note that requirements may vary slightly depending on your state, so it's essential to verify with your local Department of Vital Statistics or Health department. Here's a general guide:

1. **"Determine Eligibility":** Ensure you are eligible to apply. In most cases, you, the parent, or legal guardian can apply. If you're the child, you'll need to provide legal proof of your guardianship.
2. **"Gather Required Documents":**
 - "Proof of Identity": This can be a valid ID like a driver's license, passport, or military ID. For minors, you may need to provide the identity of the parent or legal guardian.
 - "Proof of Relationship": Documents like a marriage certificate, birth announcement, or adoption papers (if applicable) can serve this purpose.
 - "Date of Birth": Original birth certificate or a certified copy is usually required.
3. **"Complete the Application":** Most applicants fill out a form available at their local vital statistics office or online. Some states offer application forms via email or online platforms.
4. **"Submit the Application":** You can submit your application in person, by mail, or sometimes through an online portal, depending on your state's policies.

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The City Analysis tab provides details such as crime index, safety measures, and accident statistics for a selected city (example: Chennai). The Citizen Services tab answers user queries with step-by-step government procedures, such as applying for a birth certificate.

8.CONCLUSION:

The CitizenAI application demonstrates how **Generative AI** can be applied to improve civic engagement and public awareness. By

combining **city analysis** and **citizen services assistance**, the system helps individuals access reliable information about safety, traffic, and government procedures in a simple and interactive way.

Key Outcomes:

- Provides easy-to-understand insights on city statistics such as crime and accident rates.
- Delivers step-by-step guidance for citizen services (e.g., applying for certificates, accessing schemes).
- Empowers citizens to stay informed and engaged with governance.
- Encourages safe, responsible use of AI by including disclaimers and pointing to official sources.

Future Scope:

- Integration with official e-governance portals for real-time updates.
- Multilingual support for wider accessibility.
- Enhanced dashboards for public officials to monitor feedback.
- Cloud deployment for scalability and secure access.

Overall, CitizenAI acts as a bridge between citizens and government services, promoting transparency, awareness, and smarter civic participation.
