

# Intelligent Citizen Engagement Platform

## 1. Introduction

- Project title: Intelligent Citizen Engagement Platform
- Team Leader: S.Harini
- Team member: M.Kaviya
- Team member: K.Hema
- Team member: A.Kiruthiga

## 2. Project Overview

The purpose of the Intelligent Citizen Engagement Platform is to empower cities and their residents by leveraging AI and real-time data to foster efficient, inclusive, and resilient urban environments.

## 3. Features

Conversational Interface, Policy Summarization, Resource Forecasting, Eco-Tip Generator, Citizen Feedback Loop, KPI Forecasting, Anomaly Detection, Multimodal Input Support, Streamlit or Gradio UI

## 4. Architecture

Frontend (Streamlit): Interactive web UI  
Backend (FastAPI): RESTful API endpoints  
LLM Integration (IBM Watsonx Granite): Natural language processing  
Vector Search (Pinecone): Document semantic search  
ML Modules: Forecasting and Anomaly Detection

## 5. Setup Instructions

Python 3.9+, pip, virtual environment tools, API keys for IBM Watsonx and Pinecone.  
Installation: clone repo, install dependencies, configure .env, run backend and frontend.

## 6. Folder Structure

app/, app/api/, ui/, smart\_dashboard.py, granite\_llm.py, document\_embedder.py,  
kpi\_file\_forecaster.py, anomaly\_file\_checker.py, report\_generator.py

## 7. Running the Application

Run FastAPI server, start Streamlit dashboard, navigate via sidebar, upload documents, interact with chat, view outputs.

## 8. API Documentation

POST /chat/ask, POST /upload-doc, GET /search-docs, GET /get-eco-tips, POST /submit-feedback

## 9. Authentication

JWT, OAuth2, Role-based access, planned user sessions and history tracking.

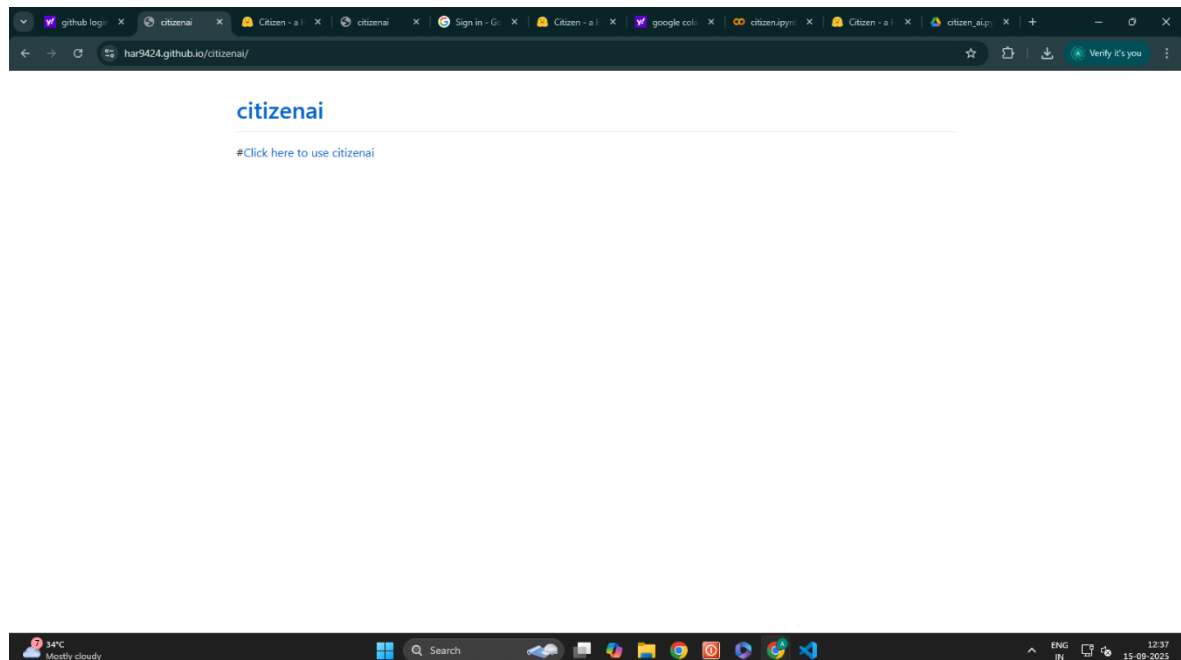
## 10. User Interface

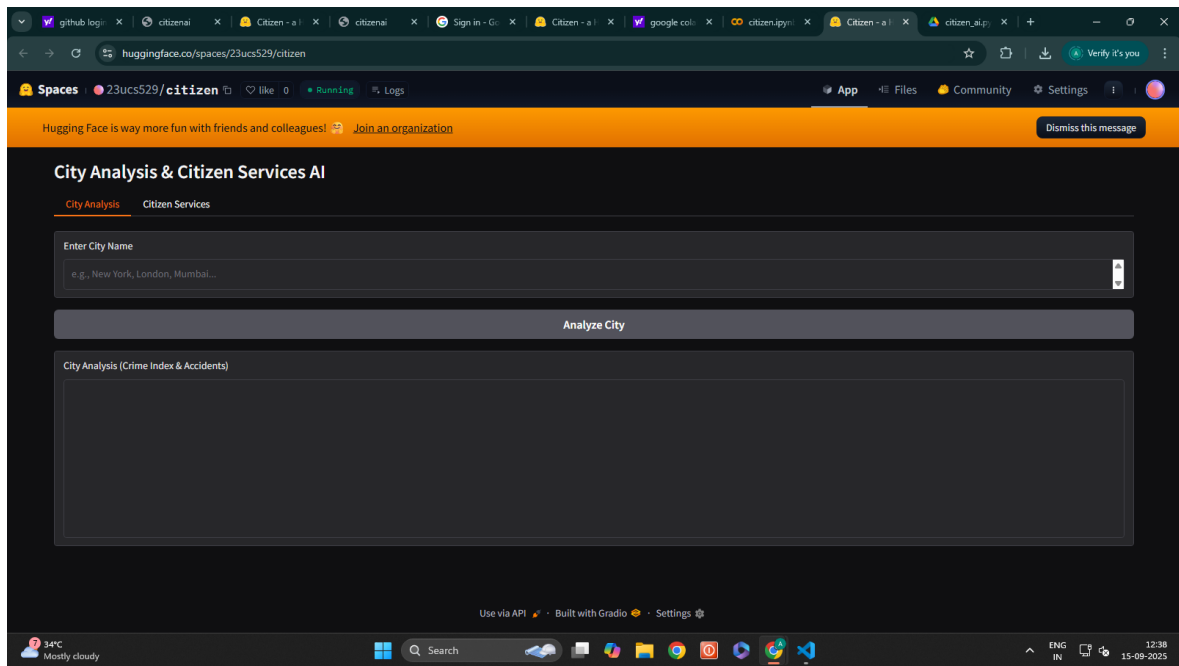
Minimalist design, sidebar navigation, KPI visualizations, tabbed layouts, real-time form handling, PDF report downloads.

## 11. Testing

Unit Testing, API Testing, Manual Testing, Edge Case Handling

## 12. Screenshot and demo link





## 13. Future Enhancement