Citizen AI Project Documentation

# Title: Citizen AI – Intelligent Citizen Engagement Platform

1. **INTRODUCTION**

## Project Overview

## Citizen AI is a smart, AI-powered civic engagement platform designed to bridge the gap between citizens and municipal authorities. It allows users to easily report civic issues (like potholes, broken streetlights, or water supply outages) via a chatbot, while enabling officers to manage, track, and respond through a centralized dashboard. The platform leverages sentiment analysis to help prioritize complaints and improve governance transparency.

## Purpose

## Simplify the way citizens report civic issues through an AI-powered chatbot.

## Streamline how municipal officers track, prioritize, and resolve complaints.

## Strengthen trust and transparency between local authorities and the public.

## 👥 Team Members:

* Chandu Mounika
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* Bathula Naga Sri Bhargav
* Bodi Deepak Sai

# IDEATION PHASE

## Problem Statement

## Manual civic feedback systems are scattered, slow, and inefficient—making it hard for citizens to report issues and for authorities to prioritize responses effectively

## Empathy Map Canvas

## Citizen feels unheard and frustrated; officer feels overwhelmed and disorganized

## Brainstorming

Explored chatbot-based issue reporting, sentiment analysis, admin dashboards, and future ideas like WhatsApp bots, voice input, and smart city integrations.

# REQUIREMENT ANALYSIS

## Customer Journey Map

## Discover → Report → Receive Response → Track Progress → Resolution → Return

## Solution Requirement

* Sentiment analysis for understanding citizen mood
* Backend server with database storage
* Admin dashboard for tracking and response
* Web-based platform accessible via browser
* AI chatbot interface for reporting issues

## Data Flow Diagram

## Citizen → Chatbot → NLP & Sentiment Analysis → Complaint Processing → Database → Admin Dashboard → Officer Response → Citizen

## Technology Stack

* **Frontend**: ReactJS / HTML / CSS
* **Backend**: Python Flask or Node.js
* **AI/NLP**: Hugging Face, Text Blob, or IBM Granite
* **Hosting**: Render, Azure, or PythonAnywhere

# PROJECT DESIGN

## Problem-Solution Fit

Manual civic complaint systems are slow and scattered—CitizenAI solves this by using AI-powered chatbots and dashboards for faster, smarter, and more transparent governance..

## Proposed Solution

## CitizenAI proposes using an AI chatbot to collect citizen complaints, analyze them with NLP and sentiment analysis, and route them to a dashboard where municipal officers can review, prioritize, and respond efficiently

## Solution Architecture

## Citizen → AI Chatbot → NLP & Sentiment Engine → Complaint Database → Admin Dashboard → Officer Action → Citizen Feedback

# PROJECT PLANNING & SCHEDULING

## Project Planning

**Week 1** – Requirements gathering & UI design  
**Week 2** – Backend & chatbot integration  
**Week 3** – Dashboard development & testing  
**Week 4** – Deployment & final evaluation

# FUNCTIONAL AND PERFORMANCE TESTING

## Performance Testing

## Tested the chatbot, backend, and dashboard under different loads to ensure fast response times, accurate complaint handling, and smooth performance—even with multiple users.

# RESULTS

## Output Screenshots

## Chatbot Interface: User-friendly chat window for reporting issues

## Complaint Submission: Form or message confirmation after reporting

## Admin Dashboard: Visual charts showing issue categories, sentiment trends, and status updates

## Status Tracker: Citizens can view progress of their complaints

# ADVANTAGES & DISADVANTAGES

## Advantages

## Quick and easy civic issue reporting

## Real-time tracking and smart analytics

## Boosts transparency and citizen engagement

## Disadvantages

## Requires reliable internet access

## May face challenges with diverse language inputs

## Initial setup and training for officials needed

# CONCLUSION

Citizen AI enhances civic engagement by making issue reporting simple, transparent, and efficient through AI-driven automation and real-time dashboards

# FUTURE SCOPE

Expand to mobile and voice platforms, integrate geo-tagging and IoT sensors, and scale across cities for smarter governance.

# APPENDIX

## Source Code

\_\_pycache\_\_  env/  flask\_session/  static/  templates/  app.py  model.py  pyvenv.cfg  README.md  requirements.txt

## GitHub & Project Demo Link

GitHub Repository : https://github.com/MounikaChanduu/CitizenAI.git

Demo video Link: https://drive.google.com/file/d/1RhBmCiGWirlaHP57FJbkes8U4Ksht6dr/view?usp=drivesdk

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