Citizen AI - Intelligent Citizen Engagement Platform

Documentation Format

1.Introduction

Project Title: Citizen AI - Intelligent Citizen Engagement Platform

Team Members and Roles:

- Kalla Venkata Siva Meghana -Final report Developer
- Kalluri Chiranjeevi - Collected necessary data
- Bommisetty V K L Vyshnavi - Project Planning and Backend developer
- Konithala Nagavidya - Desiging and Template Creator

2. Project Overview

Purpose:

The Citizen AI platform aims to streamline citizen management by providing a centralized and intelligent system for accessing information and services. It improves efficiency, transparency, and citizen engagement through a user-friendly interface and automated processes.

Features:

- **Citizen Profile Management:** Secure storage and management of citizen data.
- **Service Request Submission:** Online submission of service requests with tracking.
- **Automated Notifications:** Real-time updates and notifications on service requests and important information.
- **Data Analytics and Reporting:** Insights into citizen needs and service performance.
- **Secure Authentication:** Secure access to the platform with role-based permissions.

3. Architecture

The Citizen AI platform follows a three-tier architecture:

- **Frontend:** React - Provides a responsive and interactive user interface.
- **Backend:** Node.js/Express.js - Handles API requests, business logic, and data processing.
- **Database:** MongoDB - Stores citizen data, service requests, and other relevant information.

4.Setup Instructions

Prerequisites:

- **Python**
- **Flask**
- **PyTorch**
- **Hugging Face Libraries**
- **Sufficient Hardware**
- **RAM**
- **GPU (Recommended)**
- **Internet Connection**

- **Project Structure**

Installation Steps:

1. Clone the repository:
2. Install backend dependencies:
3. Install frontend dependencies:
4. Set up environment variables. Create files in both and directories.

5. Folder Structure

Client (React):

- src/: Contains React components, pages, hooks, services, and assets.
- public/: Static assets.
- components/: Reusable UI components.
- pages/: Top-level components representing different views.
- services/: API integration logic.
- utils/: Utility functions.
- assets/: Images, icons, etc.

Server (Node.js):

- api-gateway/: API Gateway configuration.
- config/: Global configurations.
- models/: Database schemas.
- routes/: API endpoint definitions.
- controllers/: Business logic.
- middlewares/: Express.js middleware.
- utils/: Server-side utility functions.

6. Running the Application

Frontend:

Navigate to the client directory and run: npm start .

Backend:

http://127.0.01:8000

7. API Documentation

Tooling: API documentation will be generated using tools like **Postman Collections**.

Endpoints: Detailed documentation for all RESTful API endpoints exposed by each microservice, including:

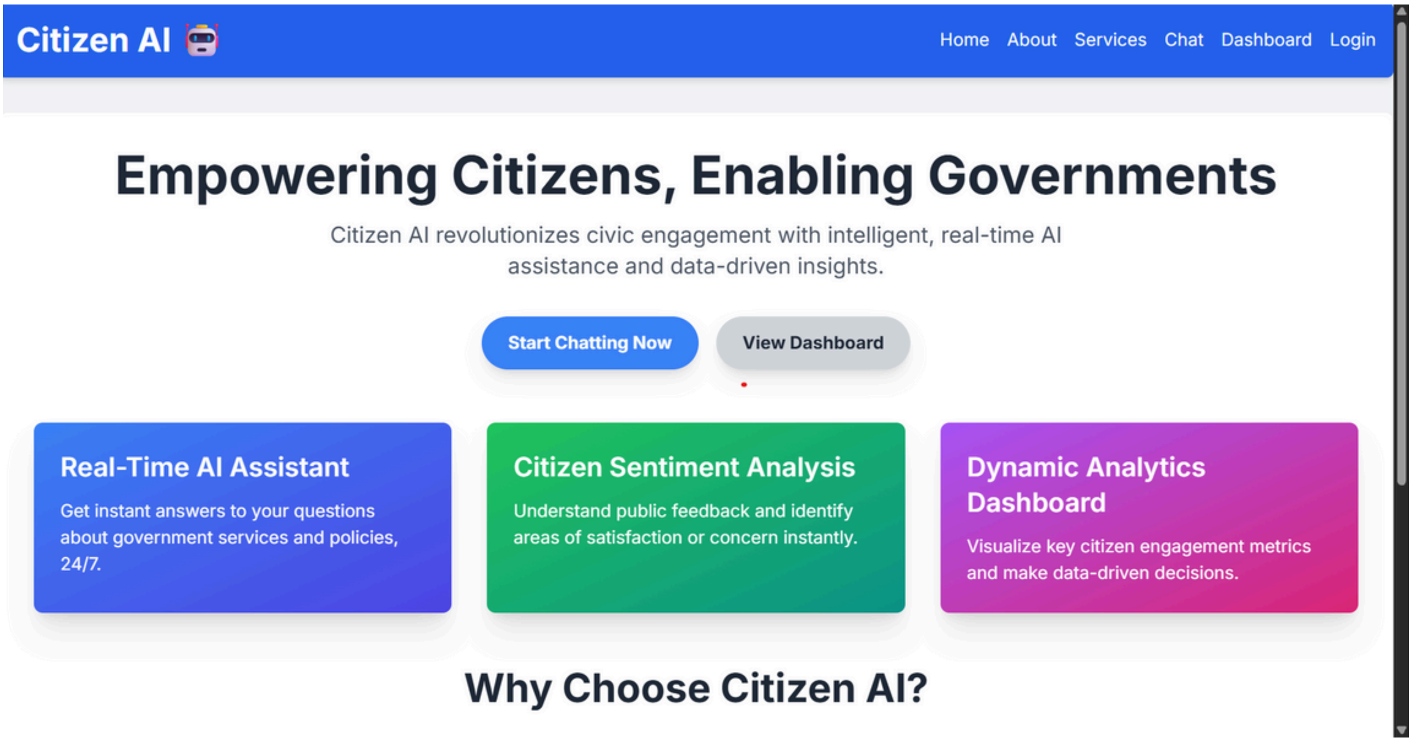
8. Authentication

Upon successful login (email/password, Google, or Facebook), the backend User Management Service generates a JWT.

For subsequent API requests, the client includes the JWT in the Authorization header.

9. User Interface

HOME PAGE:



Empowering Citizens, Enabling Governments

Citizen AI revolutionizes civic engagement with intelligent, real-time AI assistance and data-driven insights.

Real-Time AI Assistant

Get instant answers to your questions about government services and policies, 24/7.

Citizen Sentiment Analysis

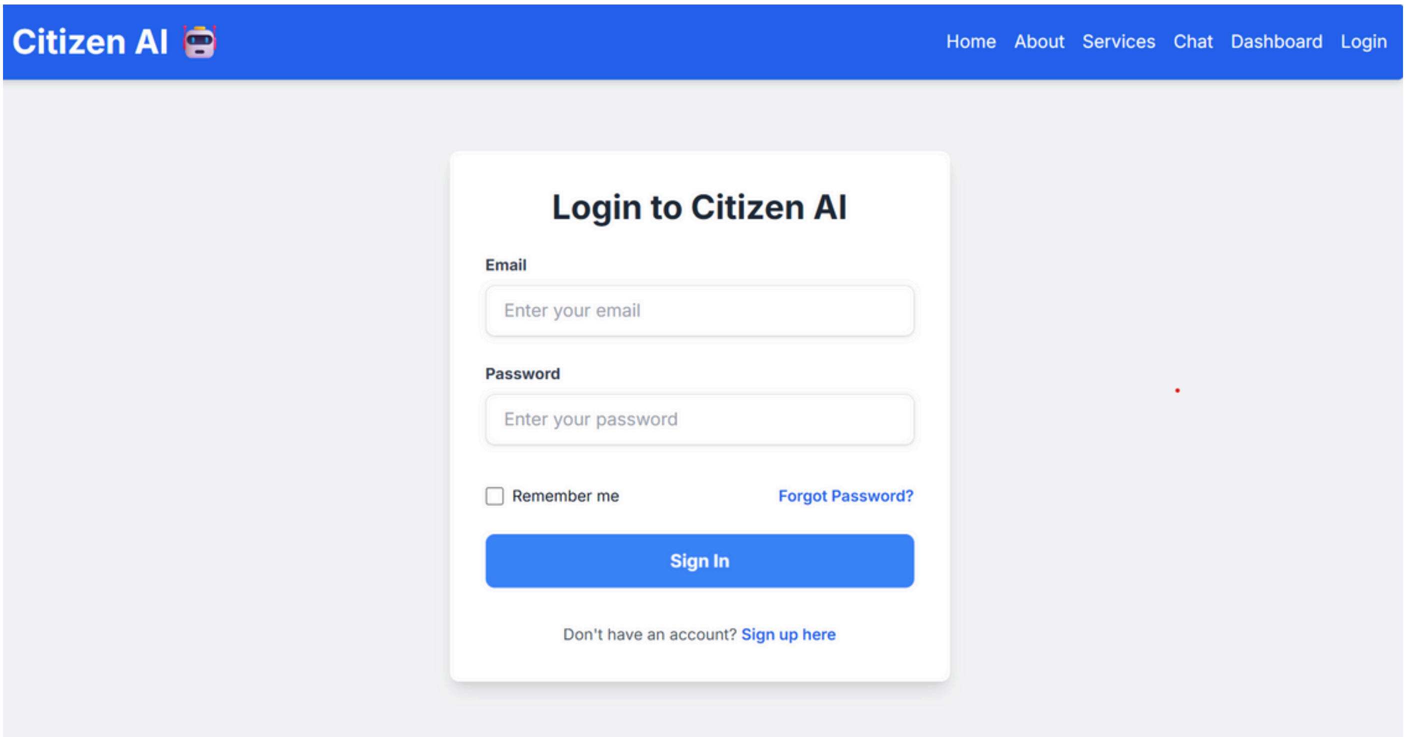
Understand public feedback and identify areas of satisfaction or concern instantly.

Dynamic Analytics Dashboard

Visualize key citizen engagement metrics and make data-driven decisions.

Why Choose Citizen AI?

LOGIN PAGE:



Login to Citizen AI

Email

Enter your email

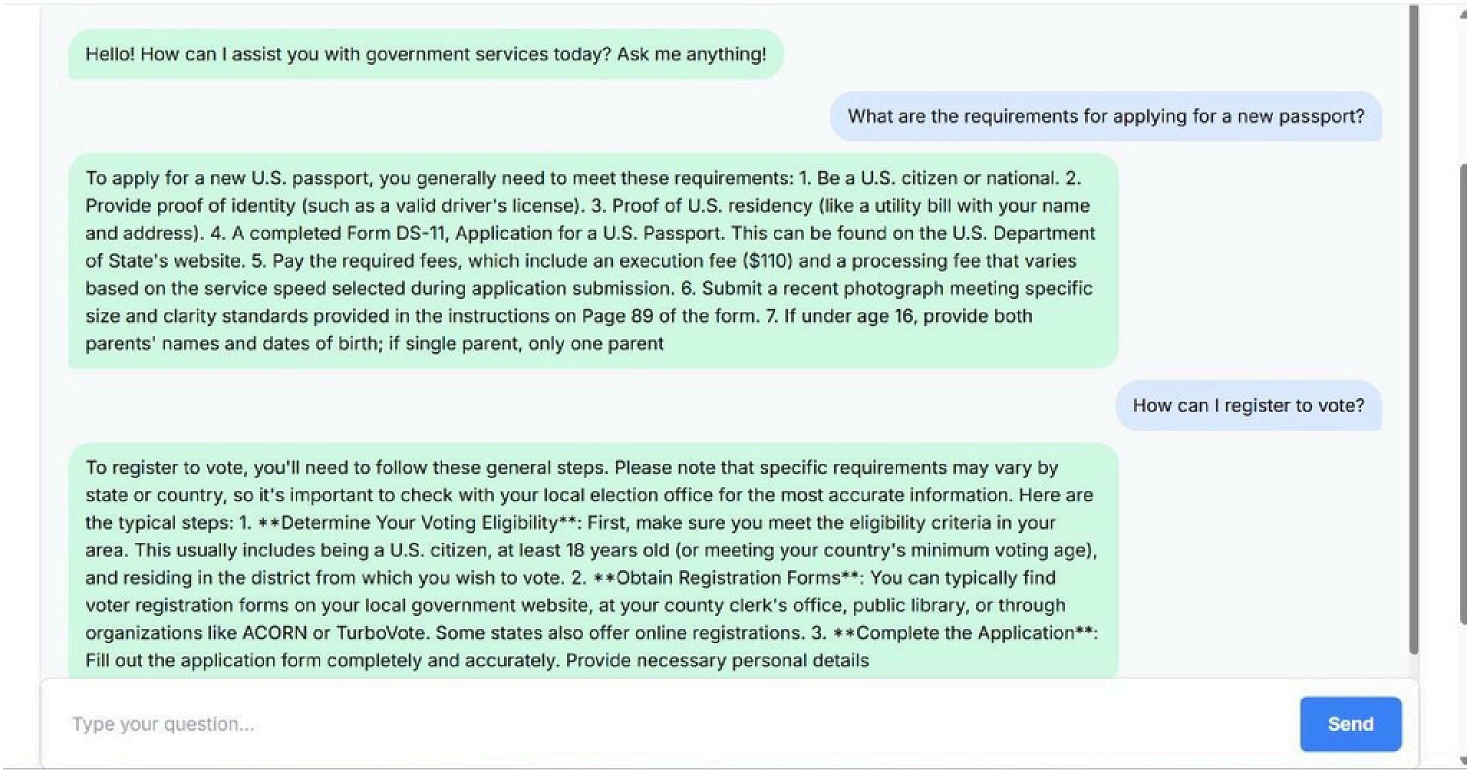
Password

Enter your password

□ Remember me   Forgot Password?

Don't have an account? Sign up here

CHAT PAGE:



Hello! How can I assist you with government services today? Ask me anything!

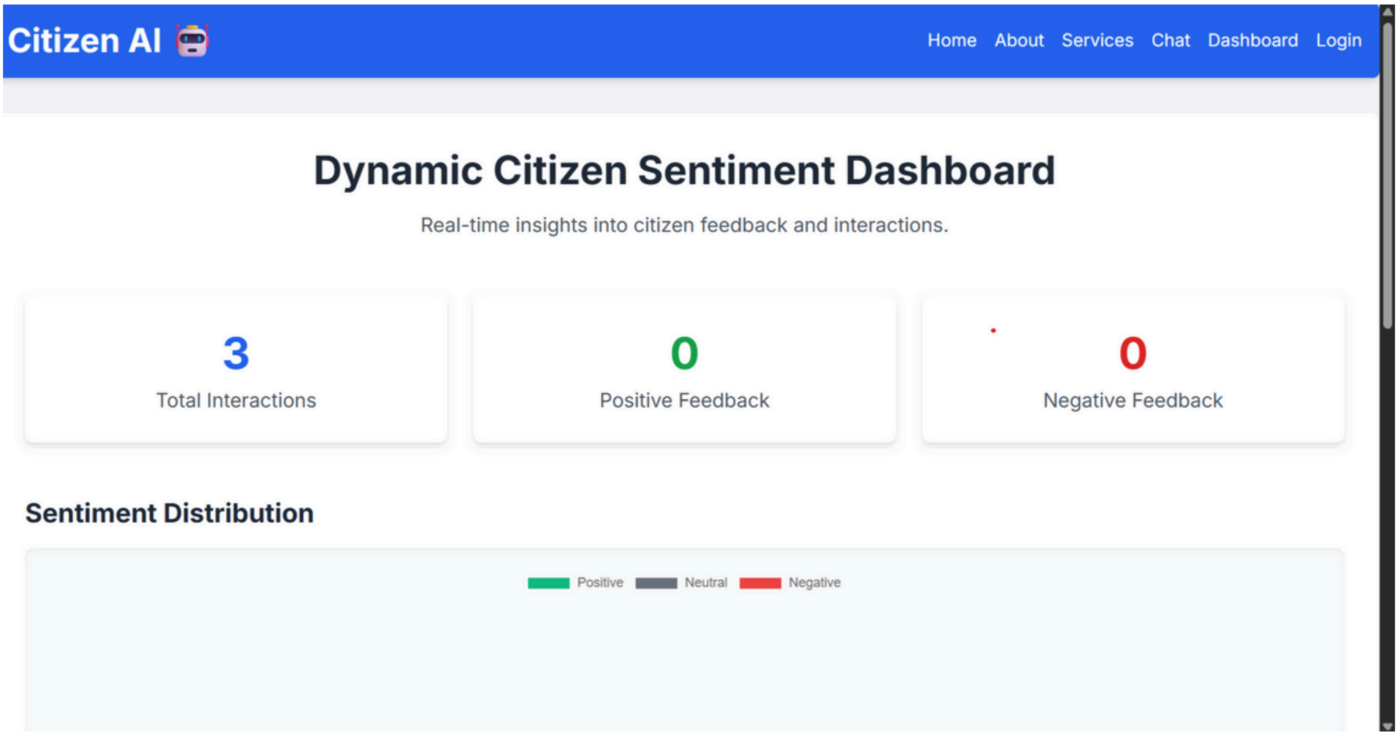
What are the requirements for applying for a new passport?

To apply for a new U.S. passport, you generally need to meet these requirements: 1. Be a U.S. citizen or national. 2. Provide proof of identity (such as a valid driver's license). 3. Proof of U.S. residency (like a utility bill with your name and address). 4. A completed Form DS-11, Application for a U.S. Passport. This can be found on the U.S. Department of State's website. 5. Pay the required fees, which include an execution fee ($110) and a processing fee that varies based on the service speed selected during application submission. 6. Submit a recent photograph meeting specific size and clarity standards provided in the instructions on Page 89 of the form. 7. If under age 16, provide both parents' names and dates of birth; if single parent, only one parent

How can I register to vote?

To register to vote, you'll need to follow these general steps. Please note that specific requirements may vary by state or country, so it's important to check with your local election office for the most accurate information. Here are the typical steps: 1. **Determine Your Voting Eligibility**: First, make sure you meet the eligibility criteria in your area. This usually includes being a U.S. citizen, at least 18 years old (or meeting your country's minimum voting age), and residing in the district from which you wish to vote. 2. **Obtain Registration Forms**: You can typically find voter registration forms on your local government website, at your county clerk's office, public library, or through organizations like ACORN or TurboVote. Some states also offer online registrations. 3. **Complete the Application**: Fill out the application form completely and accurately. Provide necessary personal details

DASHBOARD:



Dynamic Citizen Sentiment Dashboard

Real-time insights into citizen feedback and interactions.

3 Total Interactions

0 Positive Feedback

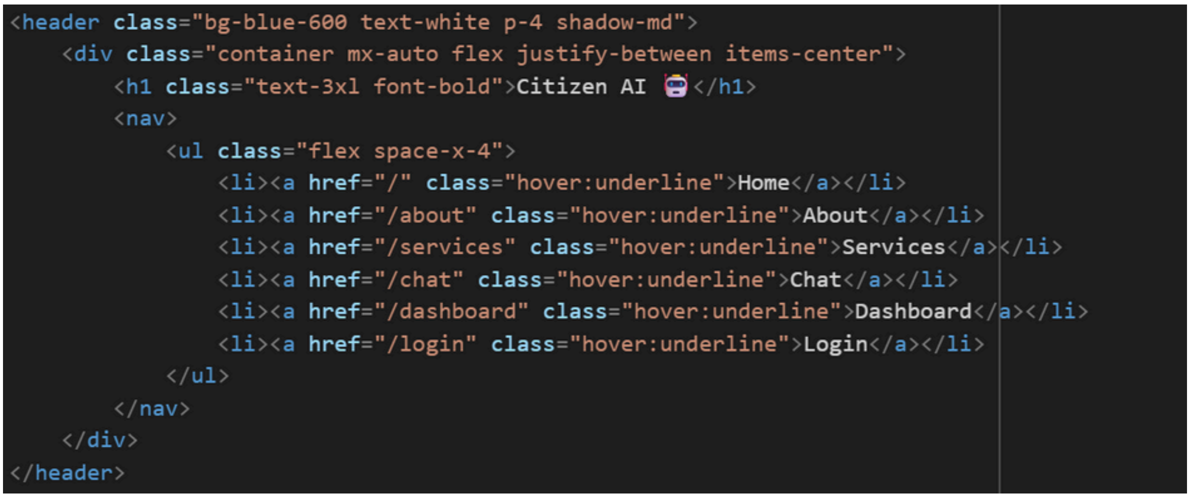
0 Negative Feedback

Sentiment Distribution

10. Testing

- **Unit Testing:** Testing individual components and functions in isolation.
- **Integration Testing:** Testing the interaction between different modules and services.
- **End-to-End Testing:** Testing the entire application workflow from the user's perspective.

11. Screenshots



```
<header class="bg-blue-600 text-white p-4 shadow-md">
    <div class="container mx-auto flex justify-between items-center">
        <h1 class="text-3xl font-bold">Citizen AI 🤖</h1>
        <nav>
            <ul class="flex space-x-4">
                <li><a href="/" class="hover:underline">Home</a></li>
                <li><a href="/about" class="hover:underline">About</a></li>
                <li><a href="/services" class="hover:underline">Services</a></li>
                <li><a href="/chat" class="hover:underline">Chat</a></li>
                <li><a href="/dashboard" class="hover:underline">Dashboard</a></li>
                <li><a href="/login" class="hover:underline">Login</a></li>
            </ul>
        </nav>
    </div>
</header>
```

12. Known Issues

Initial version of the chatbot has limited conversational scope.

13. Future Enhancements

- **Offline Mode:** Enable limited functionality for issue reporting even without an internet connection.
- Implement a more robust notification system (e.g., email, SMS).
- Add support for multiple languages.
- Integrate with third-party services (e.g., payment gateways, mapping services).
- Implement advanced data analytics and reporting features.
- Improve user interface accessibility.