**Smart Sight application :**

**Major features:**

**Voice Control System** :

Provides hands-free operation through voice commands and uses Web Speech API for speech recognition.

Supports continuous listening mode

Processes natural language commands

Handles multiple command types (navigation, identification, reading, etc.)

Object Recognition (openai\_service.py)

Uses advanced image processing to identify objects

**Text Reading (openai\_service.py):**

Extracts text from images

Handles various text formats and layouts

Provides contrast analysis for text clarity

Detects text regions in images

**Emergency Features**

Quick activation through voice commands

Visual emergency mode with flashing red screen

Provides loud audio alerts

Easy cancellation command

**Automatic camera selection (prefers back camera)**

Optimized image capture

Real-time preview capability

Permission management

Safety-first approach in navigation

Connection error handling

Permission error management

Privacy Features

Local image processing when possible

No permanent storage of images

Session-based user data

Secure API handling

Permission-based access control

Clear privacy notifications

**User Interface**

Simple, uncluttered design

Touch-friendly interface

Visual feedback indicators

Loading states and animations

Clear status messages

Intuitive button layout

**Database Integration (models.py)**

Stores user queries

Maintains response history

Knowledge base storage

Session management

Question to ask Nayan The Chatbot for Smart Sight Application:

**For Object Recognition Questions:**

"What is this?"

"What do you see?"

"Identify objects"

"Describe what's around me"

"What's in front of me?"

**Navigation Commands:**

"Guide me"

Navigate me

**Questions you can ask the chatbot:**

**Text Reading Commands:**

"Read this text"

"Read aloud"

"Read this document"

**General Information:**

What is smart sight?

"What can you do?"

"How does this work?"

**Emergency Assistance:**

"Emergency mode"

"Help me"

"Cancel emergency"

**System Controls:**

"Start listening"

"Stop listening"

"Night mode"

"Normal mode"

"Dark mode"

**Memory & Knowledge:**

"Remember that information.

"Store this information"

**Help & Support:**

"How do I use this?"

"Give me instructions"

"Tutorial"

"Show me how to use this"

The app uses natural language processing, so you can ask questions conversationally rather than using exact commands. The voice interface is designed to be intuitive and accessible for visually impaired users.