**🎤 Voice Assistant - Interactive Web-Based AI Companion**

A modern, responsive web-based voice assistant that combines speech recognition, natural language processing, and text-to-speech capabilities to create an engaging conversational experience.

**✨ Features**

**🗣️ Dual Input Modes**

* **Voice Mode**: Real-time speech recognition with visual feedback
* **Text Mode**: Traditional text input for accessibility and convenience
* Seamless switching between modes

**🧮 Smart Math Calculator**

* Voice-activated calculations (addition, subtraction, multiplication, division)
* Natural language processing for math queries
* Support for decimal numbers and formatted results
* Examples: "Calculate 25 plus 30", "What is 15 times 8"

**💬 Conversational AI**

* Intelligent responses to greetings, questions, and commands
* Personality-rich interactions with humor and warmth
* Cultural awareness with Indian context (Bollywood, festivals, food)
* Random jokes, facts, quotes, and compliments

**🍳 Recipe Assistant**

* Detailed cooking instructions for popular Indian dishes
* Biryani, Butter Chicken, Dosa, Chole Bhature, and more
* Step-by-step guidance for traditional recipes

**🎯 Smart Features**

* Time and date queries
* Motivational quotes and fun facts
* Engineering and coding motivation
* Study and career advice
* Festival and cultural information

**🎨 Modern UI/UX**

* Clean, gradient-based design with smooth animations
* Responsive layout that works on all devices
* Visual feedback with pulsing microphone animation
* Typing indicators for enhanced user experience
* Professional color scheme with accessibility in mind

**🚀 Live Demo**

[Add your deployed link here]

**🛠️ Technologies Used**

* **HTML5**: Semantic structure and modern web standards
* **CSS3**: Advanced styling with gradients, animations, and responsive design
* **Vanilla JavaScript**: Core functionality and DOM manipulation
* **Web Speech API**: Speech recognition and synthesis
* **SpeechRecognition API**: Real-time voice input processing
* **SpeechSynthesis API**: Text-to-speech responses

**📱 Browser Compatibility**

* ✅ Chrome (Recommended)
* ✅ Edge
* ✅ Safari (Limited speech recognition support)
* ⚠️ Firefox (Limited speech recognition support)

*Note: Full voice features work best in Chromium-based browsers*

**🎮 How to Use**

1. **Clone the repository**
2. git clone https://github.com/ankitaaidev/voice-assistant.git
3. cd voice-assistant
4. **Open in browser**
5. # Simply open index.html in your preferred browser
6. open index.html
7. **Start talking!**
   * Click the microphone button and speak your command
   * Or switch to text mode and type your message
   * The assistant will respond both visually and audibly

**🗣️ Voice Commands Examples**

**Math Operations**

* "Calculate 25 plus 30"
* "What is 45 divided by 5"
* "15 times 8"
* "100 minus 25"

**General Queries**

* "Hello" / "Hi"
* "What time is it?"
* "Tell me a joke"
* "Give me a fun fact"
* "What's your name?"

**Cultural & Lifestyle**

* "Tell me about Bollywood"
* "Biryani recipe"
* "What's your favorite Hindi movie?"
* "Tell me about Diwali"

**Personal Assistant**

* "Give me motivation"
* "Tell me a quote"
* "Help with studies"
* "Career advice"

**🏗️ Architecture**

voice-assistant/

├── index.html # Main HTML structure

├── styles/ # CSS styling (embedded)

├── scripts/ # JavaScript functionality (embedded)

└── README.md # Project documentation

**Key Components**

1. **Speech Recognition Handler**: Processes voice input using Web Speech API
2. **Command Parser**: Analyzes user input and determines appropriate responses
3. **Math Engine**: Handles numerical calculations with natural language
4. **Response Generator**: Creates contextual, personality-rich responses
5. **UI Controller**: Manages visual feedback and mode switching

**🎨 Design Philosophy**

* **Accessibility First**: Multiple input methods ensure everyone can interact
* **Responsive Design**: Beautiful experience across all device sizes
* **Visual Feedback**: Clear indicators for system state and user actions
* **Cultural Sensitivity**: Responses tailored for Indian users with local context
* **Performance Optimized**: Lightweight and fast-loading

**🔮 Future Enhancements**

* [ ] Multi-language support
* [ ] Weather API integration
* [ ] Calendar and reminder functionality
* [ ] Custom wake word detection
* [ ] Voice training and personalization
* [ ] Integration with external APIs
* [ ] Offline mode capabilities
* [ ] Mobile app version

**🤝 Contributing**

Contributions are welcome! Here's how you can help:

1. Fork the repository
2. Create a feature branch (git checkout -b feature/AmazingFeature)
3. Commit your changes (git commit -m 'Add some AmazingFeature')
4. Push to the branch (git push origin feature/AmazingFeature)
5. Open a Pull Request

**Contribution Ideas**

* Add new voice commands
* Improve speech recognition accuracy
* Add more languages
* Enhance UI/UX
* Add new conversation topics
* Optimize performance
* **👨‍💻 Author**

**Ankita - AI Developer**

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* Inspiration from popular voice assistants
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