Healthcare Translation Web App with Generative AI

This document hold details about the code files uploaded in NAO_MEDICAL repository

Overview

The designed web application is a dynamic and user-friendly platform that provides real-time language translation and speech synthesis. It leverages modern web technologies—HTML, CSS, and JavaScript—to create a seamless and intuitive interface for users. The application is ideal for individuals seeking fast, accessible, and interactive translation tools.

Core Features

1. **Dual Transcript Display**:
    - The application displays both the original and translated text simultaneously, allowing users to compare and analyze the output efficiently.
2. **Language Selection**:
    - Users can choose input and output languages through intuitive dropdown menus. This ensures flexibility for multilingual communication.
3. **Real-Time Translation**:
    - Using the Google Translate API, the app delivers fast and accurate translations as users input text.
4. **Text-to-Speech (Speak) Feature**:
    - The translated text can be played back in audio format using the built-in SpeechSynthesis API, enhancing accessibility for diverse users.
5. **Responsive Design**:
    - The application adjusts seamlessly to different screen sizes, ensuring a smooth user experience on desktops, tablets, and mobile devices.

How It Works

1. **Input Text**:
    - Users enter text in their preferred language in the input text area.
2. **Select Languages**:
    - From the dropdown menus, users choose the source language (input) and target language (output).
3. **Translate Text**:
    - Upon clicking the "Translate" button, the app fetches the translation from the Google Translate API and displays it in the output text area.
4. **Text-to-Speech**:

    - By pressing the "Speak" button, the application converts the translated text into speech and plays it, offering an auditory experience.
5. **Real-Time Updates**:
    - As users modify the input, the output updates dynamically, ensuring a smooth workflow.

Main Features and Advantages

- **Real-Time Interactivity**: Enables immediate translation and playback without delays.
- **Accessibility**: The text-to-speech functionality ensures usability for visually impaired users.
- **Multilingual Support**: A wide array of supported languages makes the app versatile for global users.
- **Simplicity**: The minimalistic design ensures that even non-technical users can navigate and use the app effortlessly.

This web app combines practical features and modern technology to address the needs of a multilingual audience. Its real-time functionality and user-focused design make it a valuable tool for communication, learning, and accessibility.

note: the project has all the functionalities to run a web and meet the needs but due to **google translate API** accessibility constraint I haven't been able to integrate it, the code will be holding a **gemini API** which demonstrate that the integration is done correctly and the app will function correctly as we apply links of the correct API and its keys.

note: I have uploaded two different folders containing code files performing the same functionalites so the other folder named "**Nao Medical"** has a two code files containing html and js code which is integerated with **webspeech API** which is free but has it own contraints related to text translation.