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**Particulars of author**

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| **Name, Nationality and Address of The Parties** | Kumar Sahil, Bittu Kumar, and Ravi Ronak, Indian nationality, residing at Patna, Bihar, India. |
| **Title of Work** | **Express AI** – Emotional Tone-Powered Text To Speech Web Extension. |
| **Category of Work** | Software (Web Extension) |
| **Language of Work** | HTML, CSS, JavaScript, Json, Ajax, Python and its library |
| **Whether Work Published or Unpublished?** | Unpublished (under academic submission only)  However, the source code and documentation of the project have been **published publicly on GitHub** under **Apache License 2.0**, which grants users the rights to **use, reproduce, modify, and distribute the work**, provided that proper credit is given to the original authors and that a copy of the license is included with any redistribution. Any use or modification of the code must include appropriate attribution to the original authors. |
| **Is Work to Be Registered Original?** | Yes |

**Abstract**

***Express AI*** is a Chrome extension designed to assist visually impaired individuals by reading webpage content with emotional tone modulation. It uses both screen reader and emotional intelligence concepts to deliver a natural and empathetic reading experience with customizable voice types, reading modes, and smart handling of links and images.

Express AI also incorporates sound effects to enrich the user experience further, helping both visually impaired and sighted users connect more deeply with online content. By providing a more engaging and meaningful reading experience, this extension ensures that individuals can enjoy a dynamic, nuanced, and context-aware auditory experience, facilitating improved comprehension and emotional connection with the content.

**Background**

Visually impaired individuals often struggle to access and understand the emotional tone of content on web pages. Current software solutions mainly focus on reading the text aloud without conveying the writer's emotional intent. This project introduces Express AI, a browser extension developed by Team Apex, which aims to enhance the reading experience for visually impaired users. Unlike traditional text-to-speech tools, Express AI integrates advanced artificial intelligence models to analyze the emotional context of web content. This allows the extension to dynamically adjust the voice output, conveying both the text and the emotional tone behind the words. For example, a sentence expressing excitement is read with enthusiasm, while a serious statement is delivered in a calm and thoughtful tone.

**Detailed Description**

* Our idea integrates various services and technologies to create a single, lightweight web-based accessibility tool. The core functionalities include:
* Real-time emotional tone detection using an online ML model
* Word-by-word highlighting as the text is read
* Alt-text reading of images and intelligent hyperlink handling
* Two voice options (Male/Female) and two reading modes (Online Emotional Mode and Offline Screen Reader)
* A simple, clean, and accessible UI with blue-themed styling

**A diagram of a computer program

AI-generated content may be incorrect.Flowchart / Diagram (with labeling)**

**Major Technical Improvements / Advancements (NOVELTY)**

* Integration of emotional tone modulation within a Chrome extension
* Dual-mode speech reader (offline and online) with automatic fallback
* Intelligent hyperlink reading with three configurable modes
* Dynamic word-level text highlighting synchronized with speech
* Lightweight frontend with emotion-processing backend via free cloud service (Google Collab)
* Voice type switching and a user-friendly toggle-based interface for accessibility