

AI BASED DYSLEXIA IDENTIFIER

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ABSTRACT

Dyslexia is a prevalent learning disorder that impairs a person's ability to read, write, and understand written language, making it difficult to effectively process textual information. In order to help people with dyslexia, this project suggests creating an AI-powered assistive system that makes use of text-to-speech and machine learning technology.

With the use of AI-powered spelling and grammatical correction, real-time voice aid, and dyslexia-friendly text layout for better readability, the system can recognize dyslexic writing patterns and provide adaptive solutions. Along with error correction, the tool incorporates color-coded reading aids, phonetic-based word prediction, and text simplification techniques to improve reading comprehension and readability.

The technology is made to provide a customized experience that dynamically adjusts to the particular learning requirements and difficulties of every user. To encourage the development of literacy skills and increase user confidence in both reading and writing assignments, it also offers real-time feedback. This solution helps people with dyslexia communicate more successfully and freely by providing personal accessibility tools, workplace applications, and educational applications. The method seeks to promote inclusivity and increase learning accessibility for everyone by closing the literacy gap.

KEYWORDS: *Dyslexia Detection, Machine Learning, NLP, Text-to-Speech, Adaptive Learning, AI Assistance, Accessibility.*

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