

## ACKNOWLEDGEMENT

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## **ABSTRACT**

The project focuses on the development of an AI-driven dyslexia detection system designed to detect dyslexic traits in children at an early stage. The system integrates machine learning algorithms to analyse behavioural patterns and performance data, offering an efficient and accurate detection mechanism. Additionally, the project explores the use of gamification and multisensory learning aids to improve the learning experience for dyslexic children, enhancing their ability to read, spell, and comprehend written material. The combination of interactive, engaging educational tools aims to support and motivate dyslexic students in overcoming their academic challenges.

Incorporating multimedia-based educational interventions plays a central role in this project. Research has shown that multimedia tools, combining visual, auditory, and kinesthetics elements, can enhance learning for dyslexic students. This project examines the potential of multimedia applications as secondary learning tools to help students with dyslexia improve their academic performance. By leveraging interactive and adaptive learning platforms, dyslexic children can receive personalized educational experiences that address their unique challenges and learning styles.

The goal of this project is to create an accessible and scalable solution for both the early detection of dyslexia and the provision of targeted learning aids. By combining AI-based dyslexia detection with multisensory, gamified educational support, this project aims to provide a more inclusive approach to education for dyslexic children. The outcomes of this project will contribute to improving learning outcomes and offering a more effective and personalized educational experience for students with dyslexia.