

NLP based Autonomous grading system for Sinhala Language

Essays of grade 5 students

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Abstract

The advancement of digital tools following the COVID-19 pandemic has transformed the educational landscape, particularly in assessment methodologies. This study explores the design and implementation of an NLP-based autonomous grading system tailored for Sinhala language essays of Grade 5 students. The developed system uses structured algorithms to evaluate essays by assessing key components such as keyword usage, spelling accuracy, grammar, complex word recognition, and the application of native language norms. Data was collected from educational sources, such as textbooks and official syllabi, to build a comprehensive corpus for this under-resourced language. Through a mobile interface connected to a backend REST API, teachers input questions and keywords, allowing students to respond via the application. The results demonstrate promising accuracy in identifying essential keywords, grammar, and spelling errors, providing meaningful feedback to enhance language skills. This system bridges a gap in Sinhala language processing, contributing valuable resources and methodologies for future educational technology development.