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The University of Westminster, Coat of Arms

SpeakEase

Enhancing ASR Technology for Communication Disorders

A dissertation by

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ABSTRACT

Speech-to-punctuated-text recognition (ASR) is a form of speech recognition that has been widely used in the field of communication and speech therapy. The aim of this research is to design, develop, and evaluate a speech recognition model that takes in large amounts of datasets consisting of unintelligible audio clips and translate them to clear, comprehensible speech. This research employs a hybrid approach by integrating defective speech recognition technology with punctuation insertion technology, with a primary focus on improving the model's accuracy. The research project focuses on identifying and addressing the challenges associated with defective speech. It aims to improve the accuracy of ASR for impaired speech and to provide a reliable and accessible instrument for communication and communication therapy that can be utilized by people with diverse degrees of technical knowledge and abilities. The method can aid in improving both the efficacy and efficiency of these procedures as well as the outcomes of speech and communication therapies.