

Design of a speech recognition system using the LabVIEW programming language

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Abstract: In this study, we focus on designing and implementing an efficient automatic speech recognition (ASR) system using the LabVIEW programming language. The context of the topic is driven by the strong development of ASR technology in various fields such as virtual assistants, support for the hearing impaired, and human-machine interaction. The objective of this research is to build a speech recognition system capable of processing specific user requests accurately and quickly. The research methodology is based on a combination of theoretical analysis of ASR and experimental implementation using LabVIEW. The expected outcome of this project is to provide the scientific and technological community with a feasible solution for applying speech recognition systems in modern digital environments, thereby opening up new opportunities in research and development.

Keywords: Speech recognition system, LabVIEW, ASR, virtual assistant, human-machine interaction