***Application Technology Of Voice recognition And Speaker
Verivication Wheeled Robot Prototype***
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ABSTRACT

Wireless communication in robots can be carried out through voice, but its implementation not only depends on the technical aspect of command recognition, it also needs to consider security factors. This study implements voice recognition using feature extraction through Mel-Frequency Cepstral Coefficients (MFCC), which has proven effective for both classification and verification tasks. The Learning Vector Quantization (LVQ) method demonstrated better performance than Dynamic Time Warping (DTW), with an average confidence score of 78.42% and a response time of 0.011 seconds, while DTW recorded lower scores and slower response times. For voice command recognition, the Convolutional Neural Network (CNN) model successfully classified five commands with an average confidence score of 98.48%. These results indicate that the combination of MFCC, LVQ, DTW, and CNN can be effectively used in voice recognition and verification systems.

Keyword *:* MFCC*,* CNN*,* DTW*, Robot*, *Voice recognition, Speaker verification.*