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Sign Language to Text Conversion

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Abstract: *Sign language is crucial for Deaf and non-verbal individuals to communicate, yet it remains unfamiliarto many, and interpreters are often scarce. To address this challenge, we developed a real-time system that recognizes fingerspelling in ASL using neural networks. Our process begins by filtering hand images to enhance key features. These enhanced images are then classified by a CNN. This method achieves an impressive 98.00% accuracy in recognizing all 26 letters of the alphabet, making it a highly effective tool for improving communication.*

Keywords: Sign language recognition, text conversion, computer vision, machine learning, sensor-based systems,and human-computer interaction.