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A Position and Rotation Invariant Framework for Sign Language Recognition

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Abstract: *Sign language is a visual means of communicating through hand signals, gestures, facial expressions, and body language. It's the main form of communication for the Deaf and Hard-of-Hearing community, but sign language can be useful for other groups of people as well. Sign languages (also known as signed languages) are languages that use the visual-manual modality to convey meaning. Sign languages are expressed through manual articulations in combination with non-manual elements. Sign languages are full-fledged natural languages with their own grammar and lexicon.[1] Sign languages are not universal and are usually not mutually intelligible,[2] although there are also similarities among different sign languages. Linguists consider both spoken and signed communication to be types of natural language, meaning that both emerged through an abstract, protracted aging process and evolved over time without meticulous planning.[3] Sign language should not be confused with body language, a type of nonverbal communication..*

Keywords: Sign language, Depth sensors, Neural network, hmm model, Occluded gestures

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