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Sign Language Detection in Real Time

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Abstract: *Gesture-grounded communication is a specialized form of communication primarily employed by individuals who are deaf or hard of hearing, as well as those with speech impairments or other forms of disabilities that affect their ability to speak or hear. This type of communication allows people to convey ideas, thoughts, and emotions through hand signals or other physical gestures, serving as an alternative to spoken language. Unlike spoken languages, which rely on auditory signals, gesture-based communication depends on the visual perception of gestures made by the communicator. This form of non-verbal communication is fundamental for individuals who cannot hear or speak, enabling them to interact with others effectively within their community. While sign language is the most widely known and used system of gesture-based communication, it varies across different regions and cultures, with many countries having their own sign languages. These languages, much like spoken languages, have their own grammar, vocabulary, and syntax, which allows for rich and complex expressions.*

In the case of individuals who are hard of hearing or have speech impairments, the use of sign language (SL) is essential for conveying ideas in everyday situations, from personal conversations to professional exchanges. Sign Language Recognition (SLR) is a technology that has made significant strides in helping bridge communication gaps. It involves the use of sensors, cameras, and advanced algorithms to detect and interpret hand movements and gestures. This technology can then translate these gestures into text or even voice, allowing a seamless transition between manual gestures and digital communication. Ultimately, gesture-grounded communication is not just about translating hand movements into text or speech; it is about creating an inclusive environment where individuals can interact naturally and efficiently. As technology continues to evolve, these systems will play an increasingly important role in fostering communication and understanding among people of all abilities..

Keywords: subscribe Language, Recognition, Deaf and Dumb people, Tensorflow, Discovery