

## American Sign Language Recognition Using Deep Learning

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American Sign Language (ASL) is a visual-gestural language used by the deaf community for communication. There exists a communication gap between hearing impaired people and normal people because most normal people do not understand sign language. Conversations with hearing-impaired people become more difficult as most of us do not know sign language. Hand movements are one of the most powerful nonverbal communication methods, using non-manual and manual correspondence. ASL to text interpreting technology using hand gesture recognition could fill this communication gap. Recently, hand gesture recognition systems received great attention, and many researchers have been conducting studies on the methods for hand gesture recognition for many different purposes. Sign Language recognition is one main purpose among those purposes. Among these, the Finger Spelling method is a very interesting research problem in computer vision which has been addressed for years with different kinds of applications in various domains. In this paper, a survey of existing hand gesture recognition systems and sign language recognition systems are presented for the recognition of the Static Finger Spelling method in the American Sign Language. This sign language recognition can be achieved by using sensor-based or vision-based approaches. In this paper, both these approaches are reviewed along with the background of the problem and the pros and cons are also discussed algorithms.

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