

Sign Language Recognition using Deep Learning

Prof. S. R. Pandit¹, Mr. Jayesh Pawar, Mr. Rohit Pawar,

Ms. Priyanka Pote, Mr. Vishal Sangale

Professor, Department of Computer Engineering¹

Students, Department of Computer Engineering^{2,3,4,5}

Amrutvahini College of Engineering, Sangamner, Maharashtra, India

Abstract: Most dumb and deaf (hard of hearing) people use sign language to communicate both inside and outside of their groups. They utilize hand gestures to communicate because they are mute and deaf. Sign Language Recognition (SLR) objective is to recognize and learn hand signals and to keep going until the corresponding hand movements can be translated into text or speech. We have utilized computer vision to recognize hand motions by creating Deep Neural Network Designs Using Convolution Neural Network Architectures, where the model will learn to recognize the hand gesture photographs throughout an epoch. A text file in the English Language is created once the motion has been correctly recognized by the model and may then be converted to voice. The main Motive of the Project is to make Deaf and Dump people's communication easier. Deaf (hard of hearing) and stupid individuals mostly utilise sign language to communicate inside and outside of their respective communities. Because they are unable to speak or hear, they use hand signals to communicate. The goal of sign language recognition (SLR) is to identify acquired hand motions and to continue until related hand gestures are translated into text or speech. Building Deep Neural Network designs (Convolution Neural Network Architectures), where the model will learn to recognise the hand gesture photos throughout an epoch, allows us to use computer vision to recognise the hand motions.

Keywords: Gesture recognition, Sign language recognition, Hand pose estimation, Sign language translation, Machine Learning

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