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(57) Abstract :
The present disclosure relates to a pre-trained system (100) for conversion of sign language to alpha-numeric and alpha-numeric to sign language. The system also enables the conversion of speech into sign language and sign language into speech which can be played through a speaker (124) in the system, and display device (126) is included in the system along with the speaker (124) for an audio-visual outcome. The system enables seamless communication between deaf, dumb, hearing-impaired and non-impaired people. The system (100) accepts input in the form of text, speech or images that capture various hand-signs performed by the user. The camera (102) can successfully capture images of the hand of the user in various horizontal positions: left, right and centre. The system includes and image processor (110) that detects the outline of the hand and recognizes the hand-sign in the respective sign language, for example ASL. The datasets of various sign languages need to be fed prior to executing the system for accurate recognition of the hand-signs.

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