LITERATURE SURVEY

PROJECT TITLE : " REAL TIME COMMUNICATION SYSTEM POWERED BY AI FOR SPECIALLY ABLED"

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LITERATURE SURVEY

YEAR	TITLE	AUTHORS	DESCRIPTION
1989	An AI-based communication system for motor and speech disabled persons:Design Methodology and Prototype testing	B.K.Sy , J.K.Deller	An intelligent communication device is developed to assist nonverbal, motor-disabled persons in the generation of written and spoken messages. The device is centered on a knowledge base of the grammatical rules and message elements. A belief reasoning scheme based on both the information from external sources and the embedded knowledge is used to optimize the process of message search. The search for the message elements is conceptualized as a path search in the language graph, and a special frame architecture is used to construct and to partition the graph. An information fusion strategy is also introduced to integrate various forms of external information. Experimental testing of the prototype system is discussed.
2018	Real-time Indian Sign Language (ISL) Recognition	Kartik Shenoy, Tejas Dastane, Varun Rao, Devendra Vyavaharkar	This paper presents a system which can recognise hand poses & gestures from the Indian Sign Language (ISL) in real-time using grid-based features. This system attempts to bridge the communication gap between the hearing and speech impaired and the rest of the society. The existing solutions either provide relatively low accuracy or do not work in real-time. This system provides good results on both the parameters. It can identify 33 hand poses and some gestures from the ISL. Sign Language is captured from a smartphone camera and its frames are transmitted to a remote server for processing.

2018	Bridging the Communication Gap: With Real Time Sign Language Translation	Kaur, Pavleen; Ganguly, Payel; Verma, Saumya; Bansal, Neha	Communication is broadly defined as the process of interaction among human beings where they can share their thoughts and ideas to convey a message to each other. But people with hearing and speech impairment whose primary means of communication is sign language and hand gestures, find it difficult at times to interact with others who are not privy with this language thus resulting in a communication gap. The fact is sign language is fundamentally different from English or any other spoken language.
2019	Automatic Sign language To Improve Communication	Tiago Oliveira,Paula Escudeiro,Nuno Escudeiro,Emanuel Rocha,Fernando Maciel Barbosa	Over the last years, there has been an increase in hearing-impaired students who use sign language as their main form of communication attending higher education institutions around the world. The knowledge that their comprehension of texts is reduced due to sentence structure differences causes a need for more solutions to improve communication and support students in environments where they are unable to be accompanied by sign interpreters. This article details the improvements and current structure of the VirtualSign platform, a bidirectional sign language to text translation tool that has been in development since 2015.
2021	Machine Learning-based Hand Sign Recognition	Ms. Greeshma Pala, Ms. Jagruti Bhagwan Jethwani, Mr. Satish Shivaji Kumbhar, Ms. Shruti Dilip Patil	Sign language is a language used by deaf or hearingimpaired communities or the speechless to establish communication with others. The problem identified is the communication gap between those who cannot speak and others who can but do not know sign language. Our solution is a system that serves as a translator and helps in understanding sign language by converting it to text and speech. It can also help someone with a voice to communicate with those who only understand hand sign language.

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