

Real-Time Communication System Powered by AI for Specially Abled

Literature Survey

OBJECTIVE:

Around 466 million people in the world have physical disabilities. This model comprises of Real time communication system with those people, through Artificial Intelligence and Machine learning technique powered with different algorithm to provide people help in better manner.

EXISTING SOLUTIONS:

Robotics helping hand:

A robotic arm is implemented which will be able to pick up and place objects. An articulated robot which has three joints and four degrees of rotation is implemented for this robotic system. DC motor actuator systems are used to control shoulder, elbow and pick and place movement. Two servo motors are used in the wrist and the base of the robotic arm. The system is efficient and easy to handle. It covers around 15 sq. meter of area.

**Title-Robotic Helping Hand: A New Mechanism for
Helping Disabled People**

Author-Mohammad Abu Sayed, Nusrat Jahan Prithee and Hasan U. Zaman
IEEE xplore(2020)

Face based real time communication:

This model comprises of automated real time behaviour monitoring, designed and implemented with the ubiquitous and affordable concept in mind to suit the underprivileged. The prototype which encapsulates an automated facial expression recognition system for monitoring the disabled, equipped with a feature to send Short Messaging System (SMS) for notification purposes.

Title-Face Based Real Time Monitoring for Physically and Speech Disabled people

Author-Ong Chin Ann,Marelne Lu

Research gate,Jan 2011

Smart com for differntly abled:

Characters are embedded by sensors on the glove worn by differntly abled person if not pressed wait for the same.The characters are processed and sent to the android application.Once sent button is pressed on the glove a SMS is sent to the concerned mobile number.

Title-Smart com for Differntly Abled

Author-Shanthi D L,Keshav Prassana

ICCEECOT-Dec, 2018

Messaging and video calling:

Hand gestures are physical and non-physical movement and a way to communicate with deaf and dumb people and computer cannot interpret it directly. Hand gesture recognition has different approaches which includes kinect sensor, image processing, data glove and leap motion. The system is an android application for dumb, deaf and normal people with functionalities of messaging and video calling by converting hand gestures to text and speech and vice versa by developing a neural network model.

Title-Messaging and Video Calling Application for Specially Abled people using Hand Gesture Recognition

Author-Racchana R Chhajed, Komal P. Paramar, Neha G. Jaju

**2021 6th International Conference for Convergence in Technology (I2CT)
Pune, India. Apr 02-04, 2021**

D-TALK SIGN LANGUAGE RECOGNITION:

It represents an understanding of complex hand movements. A framework based on Hidden Markov Models (HMMs) .A detection algorithm is used to detect the hand of the user, and a contour-based hand tracker is developed, which combines condensation and partitioned sampling. The proposed approach can attain automated online identification of hand movements and can effectively reject atypical movements.

Title:D-Talk:Sign Language Recognition System for People with Disability using Machine Learning and Image Processing

Author-Bayan Mohammed Saleh, Mhummad Usman Tariq

Research Gate-September-2020