LITERATURE SURVEY

TEAM ID:PNT2022TMID38013

TITLE: Real-Time Communication System Powered by AI for Specially Abled

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S.NO	TITLE	PROPOSED WORK	TOOLS USED/ ALGORITHM	TECHNOLOGY	ADVANTAGES/DISADVANTAGES
1	D-Talk: Sign language recognition system for people with disability using machine learning and image processing.	To blend deaf and mute within the society. Artificial intelligence is used here . D-talk makes people to understand their language easier.	Spyder Neural network Gesture interpretation Speech interpretation	Machine learning • Image processing	ADVANTAGES It makes the efficient communication between deafmute and normal people. It will enhance effective career growth for deaf mute. DISADVANTAGES Gesture interpretation works efficiently only for user who knows sign language Poor lightening results in inaccurate gesture prediction.
2	Design and implementation of deaf and mute people interaction system	To bridge this gap by enabling communication between dumb\deaf people on the one hand and normal people on other hand by introducing an inexpensive electronic device that translates the fingers presses into the text and speech.	Sensor Arduino Vocalise LCD Parallax Microcontroller	Internet of things	ADVANTAGES: Less expensive using the sensors it gives accurate output. DISADVANTAGES: This needs more precautions as by using Arduino it can't run more than one program at the same time.

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3	Sign Language Recognition based on arm sensors, data glove and computer vision	A vision based light weight web-based sign language interpretation system. It provide two way communication for deaf and mute. It equipped with text to speech, speech to text and auto correct features to support communication between deaf and mute	Media pipe Random forest classifier trained on American sign language	Machine learning	ADVANTAGES: It has an autocorrect feature enabled along with speech to text and text to speech. The light weight models are suitable for the real time recognition systems. DISADVANTAGES: Computer Vision based approach are unable to obtain such high accuracy on real time data
4	Sign language recognition	Computer recognition of sign language deals from sign gesture and continues till text/speech. Sign gestures are classified in to static and dynamic	CAS-PEAL Database MEMS Sensor	Image processing	ADVANTAGES: The proposed system observes the user and give feedback in real time. DISADVANTAGES: A need for large vocabulary database is in demand.

S.NO	TITLE	PROPOSED SYSTEM	TOOLS USED/ALGORITHM	TECHNOLOGY	ADVANTAGES/DISADVANTAGES
5	Intelligent gesture Analysis, Recognition and Computation Wizard	Gesture recognition can be seen as a way for computers to begin to understand human body languages, thus building a richer bridge between machines and humans	Gait Proxemics Text user interface	Image processing	ADVANTAGES: The movement of mouse can be controlled with the tips of your fingers. DISADVANTAGES: Light source properties can affect the results. The hands in the image can vary due to rotation.

6	Hand gesture, and Speech Translation and Recognition System for specially abled people using Al.	The speech to text conversion technique, on screen test provides a better way for people with hearing impairment to visually read which is in audio. To recognize sign language and converts them into onscreen text as well as audio sounds vocally impaired.	Text to speech algorithm.	Artificial Intelligence	ADVANTAGES: By using this model ,it enables them to have an increasingly normal life and progressively self- efficient. System is connective to the users social and emotional development. DISADVANTAGES: As more number of samples are needed so it takes more time.