

Literature Survey

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S.No	TITLE	PROPOSED WORK	TOOLS USED/ ALGORITHM	TECHNOLOGY	ADVANTAGES/ DISADVANTAGES
1	Machine Learning based Intelligent System for Safeguarding Specially Abled People	<p>It is hard handle the challenges experienced by specially abled persons, like those who are visually, audibly, or vocally handicapped, with a single device. A device that can simple, quick, accurate, and effective.</p> <p>This is an idea which help the disabled people use and will protect the blind deaf and dumb people from the unknown people or thieves from getting harmed and also helpful for maintaining health issues.</p>	<ul style="list-style-type: none"> • Vibrations • Deep learning • Machine learning algorithms • Object detection • Cameras 	ARTIFICIAL INTELLIGENCE	<p>ADVANTAGES</p> <ul style="list-style-type: none"> • Device can be quick, simple, accurate and effective. • Helpful in maintaining health related issues. <p>DISADVANTAGES</p> <ul style="list-style-type: none"> • It can vary based on unknown person situations and personality.

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2	Hand Gesture Recognition and Voice Conversion System for Dumb People	<p>Sign language plays a major role for dumb people to communicate easily. It is difficult for mute people to convey their message to normal people.</p> <p>Normal people are not aware of hand sign language. The solution for this problem is to convert the sign language into convenient language.</p>	<ul style="list-style-type: none"> • Smart speaking system for mute people • Raspberry Pi • Flex Sensors • Accelerometer Sensor 	ARTIFICIAL INTELLIGENCE	<p>ADVANTAGES</p> <ul style="list-style-type: none"> • Eazy and efficient communication is done. • Conversion of language is capable in learning. <p>DISADVANTAGES</p> <ul style="list-style-type: none"> • It is difficult for mute people to convey their message to normal people and awareness is less.

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3	Real-Time Sign Language Detection	<p>A model can be build based on machine learning with trained to check different gestures of sign language and translate them into English language.</p> <p>A real time Machine learning based system is construct for the sign language detection with TensorFlow object detection in this paper.</p>	<ul style="list-style-type: none"> • TensorFlow • Object Detection AP I • Open CV • Label Image 	ARTIFICIAL INTELLIGENCE	<p>ADVANTAGES</p> <ul style="list-style-type: none"> • Translation makes communication Easy and Efficient. • Gesture based Communication used ,in which understandable for any people. <p>DISADVANTAGES</p> <ul style="list-style-type: none"> • Hence model is based on detection techniques, Some delay and lag may be there.

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4	Deep Learning Methods for Indian Sign Language Recognition	Indian Sign Language is used by specially abled people in India. Convolutional neural networks were used and segmented hand images/videos were used as on input to them 36 static hand gestures from Indian Sign Language were trained and a classification accuracy of 98.87% was achieved on the test data.	<ul style="list-style-type: none"> • Assistive technology • Semantics • Sociology • Gesture recognition • Camera • Real-time systems • Statistics 	ARTIFICIAL INTELLIGENCE	ADVANTAGES <ul style="list-style-type: none"> • Language based on Sign language with the images and videos can be easily understandable. DISADVANTAGES <ul style="list-style-type: none"> • Accuracy in the model can be not be approximate, Some little variation may be there.

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5	Sign-Voice Bidirectional Communication System for Normal, “Deaf/Dumb” and Blind People based on Machine Learning	Specially abled people face problems in communicating with others with difficulties in dealing with the communication technology. The goal is to design a desktop human system interface application that is to facilitate communication between normal, “deaf & dumb” and blind people. SVBi Comm system helps blind person to hear voice saying the word by the” deaf & dumb” while the deaf will receive a gesture representing the word said by the blind.	<ul style="list-style-type: none"> • Deaf-blind people • Deaf-blind communication devices • Neural Network 	ARTIFICIAL INTELLIGENCE	<p>ADVANTAGES</p> <ul style="list-style-type: none"> • System helps blind person to hear voice saying the word by the deaf & dumb person. • System interface application that is to Covey or communicate effectively. <p>DISADVANTAGES</p> <ul style="list-style-type: none"> • Technology based on these model is quite difficult in dealing with communication.

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6	Design of a Communication System using Sign Language aid for Differently Abled Peoples	<p>In human race there are some normal people and special people. Such special people are deaf and mute, rely on some sort of gesture language to communicate their feelings to others</p> <p>In this modern timeline there are advanced technologies, where computers, laptops and etc are an integral part of everyday life, efforts must be made to make the disabilities in life more independent.</p>	<ul style="list-style-type: none"> • Blob Detection • Skin color recognition • Template Matching • Sign to text and Speech conversion 	ARTIFICIAL INTELLIGENCE	<p>ADVANTAGES</p> <ul style="list-style-type: none"> • Simple and Eazy to access. • Involved in modern and technology based for disability with advanced mechanism. <p>DISADVANTAGES</p> <ul style="list-style-type: none"> • Detection technique may be not approximate. • Recognition based on color involved accurate color index, which can quite difficult.

THANK YOU