ARTIFICIAL INTELLIGNECE

Real-Time Communication System Powered by AI for Specially Abled

Literature Survey

BATCH:[B2-2M4A]

TEAM LEADER:

GOKUL K

TEAM MEMBERS:

CHANDRU R

AZHAGUMANI K

JOHAN F

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Literature Survey

In our society, we have people with disabilities. The technology is developing day by day but no significant developments are undertaken for the betterment of these people. Communication between deaf-mute and a normal person has always been a challenging task. It is very difficult for mute people to convey their message to normal people. Since normal people are not trained in hand sign language. In emergency times conveying their message is very difficult. The human hand has remained a popular choice to convey information in situations where other forms like speech cannot be used. Voice Conversion System with Hand Gesture Recognition and translation will be very useful to have a proper conversation between a normal person and an impaired person in any language.

TITLE :Enhancing the Ability to Communicate by Synthesizing American Sign Language using Image Recognition in A Chatbot for Differently Abled.

AUTHORS :Arjun Pardasani,Ajay Kumar Sharma,Sashwata Banerjee,Vaibhav Garg,Debdutta Singha Roy.

PUBLISHED IN: 2018

Sign Language is a mode of communication for differently abled persons -Mute (Dumb). Sign language is the hand gestures used by people to communicate. American Sign Language is the most widely used Sign language which has its own syntax and rules and by following these rules and syntax, mute people can communicate. We have used image recognition to

recognize the hand gestures. Detection of hand motions and processing of finger movement to identify what the mute person is communicating. Computer vision in python recognizes the hand gestures of a mute person and gives its output to a chatbot. Chatbot is a computer program which conducts a conversation via voice recognition. Such programs are often designed to convincingly simulate to help human beings with different tasks. This paper presents image recognition of Sign Language through hand gestures and integrate it with chatbot and gives us an audio as well as text output.

TITLE :Excitement and Concerns about Machine Learning-Based Chatbots and Talkbots: A Survey

AUTHORS :Pablo Rivas,Kerstin Holzmayer,Cristian Hernandez,Charles Grippaldi

PUBLISHED IN: 2018

Chatbots and talkbots are intelligent programs that can establish written and oral communication with human beings, usually with the purpose of helping them achieve a specific goal. More and more companies are now implementing bots in order to reduce operational costs. Most bots use machine learning algorithms that are deployed on companies websites, cloud services, or distributed mobile systems so that customers are always able to speak with `someone' to inquire about products or services. Most bots are trained using data from interactions among human beings so that they can learn speech patterns and answer questions. In this paper we present the results of an experiment designed to survey people's perception of these bots and how much people trust them. We present a moral dilemma to the respondents and ask questions about permissiveness and assess if bots are judged and blamed differently than their human counterparts. In this paper we reveal such differences in judgement, which suggest that many people hold the chatbots to similar behavioral standards than human beings; however, bots receive blame just as humans do.

TITLE :Smart Com for Differently Abled

AUTHORS :D L Shanthi,Keshava Prasanna,Gireesh Babu C N

PUBLISHED IN: 2018

Advancements in technology drives us to design new and cost effective solutions to many challenging issues related to society and human kind. This paper is an outcome of such an effort made to help impaired people having hitches in communicating with rest of the world. A design of a wearable device using an open source to aid impaired persons in communication using Malossi alphabet. Basically a Malossi alphabet based Mobile Communication and Translation Glove for differently abled. There are numerous hurdles to converse between physically disabled people and nondisabled people. The communication method of disabled people is entirely different from that of non-disabled people, so they cannot converse with each other directly. Our paper suggests an innovative method for the communication between them. The impaired person can use the glove to deliver messages and the output will be displayed or heard through an android application which can be translated into multiple languages and also be transmitted to users in different locations. This is a simple and cost-effective solution to support impaired people in communication.

TITLE :An App to Assist Differently Abled People

AUTHORS :Amitha M. Lokeshwar; Ananya Hardikar; G. C. Srivarsha; R. S. Priyanka; K. J. Bhanushree

PUBLISHED IN: 2021

The system proposes an application for differently abled people such as blind, deaf, dumb and hand disabled to communicate among themselves using Android Development. It includes voice enabled object detection and

distance estimation assistance to blind using Tensorflow Lite Object Detection API, image to speech conversion using OCR text recognition with OpenCV and TextToSpeech API to assist the blind. It also provides navigation feature for blind using Mapbox and Geocoder library. The application also has text- to-speech conversion using TextToSpeech API and speech-to- text conversion using a Speech Recognition library to facilitate easy chatting among themselves. It also provides chatting option built using Firebase.

TITLE :Implementation of voice based wheelchair for differently abled.

AUTHORS :M. Bala Kumaran, A. Pravin Renold

PUBLISHED IN: 2013

The main objective of this work is to process the voice signal and is implemented to control a wheelchair by the voice signal which is processed earlier. The adopted model is to combine PIC microcontroller and VRbot module with voice recognition system for identifying individual words and is speaker dependent. The command given by the user is taken into VRbot module by microphone which is built within speech recognition module. Once voice command is recognized, the signal is transferred to the controller where stepper motor module is connected. PIC microcontroller capture appropriate signals from speech recognition module and wait for the Ultrasonic Sensor, which is doing the process of obstacle detection in its path. Whenever the conditions, signal to move from VRbot and no obstacle detection from Ultrasonic Sensor is received, the motion of wheelchair is performed.

TITLE :Machine Learning Based Smart Assistive Device for Differently Abled People-SADDAP

AUTHORS :Jayashree Agarkhed, Lubna Tahreem

PUBLISHED IN: 2022

Recently, Human Activity Recognition (HAR) has turned into an energetic exploration region, particularly because of the spread of electronic gadgets, for example, cell phones, digital watches and camcorders present in our everyday lives. Likewise fall accidents are one of the primary sources of passing's because of cracks brought about by clash with the ground or hard obstructions. The failure to see objects around oneself is the most tragic things that could happen to an individual. This likewise annihilates the capacity of the individual to move around without anyone else in known regions and conditions. Over the range of the last decade, a few sorts of gadgets have been intended to help the differently abled individuals to move around in various types of conditions be that as it may, in any case need to have every one of the components for diversely abled individuals or senior's in one gadget. The current paper is the augmentation of our past work to add to say research with a way for offering help to differently abled or elder's people. The proposed smart assistive activity recognition device for differently abled people that perceive the movement of environment around them and assist them with living. It likewise recognizes snags and sound on their route to caution them so they don't get into an accident. The current paper adds to help differently abled individuals or elder's by permitting them to realize the encompassing objects and safe them from getting into any mishap by fall detection and obstacle detection. Activity discovery is turning into an indispensable piece of numerous portable applications. The proposed system utilizes the procedures of machine learning to make an application that would help the differently abled individuals or elders and give them a freshly discovered expectation for cherishing the lavishness and difficulty of the world, meanwhile effectively explore in it.