REAL-TIME COMMUNICATION SYSTEM POWERED BY AI FOR SPECIALLY ABLED IN HEALTH CARE

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PROPOSED SOLUTION

The portable device is the transduction system and consists of a glove comprising 5 flex sensors connected to a microcontroller through front-end electronics. The sensors are positioned in the glove hence the finger joints are in the middle of the sensitive area this way the sensor covers the finger joint area and follows its movement. Doing sign language our finger will bend, each bending of finger the sensor send signal to our controller. Our controller match the sensor signals with train signals. Recorded audio sound will playback for each sign. Opposite person easily communicate to deaf a keypad and display is used. Hearing impaired users can use text descriptions and icons. This module makes the device handy for the vocally disabled as it enables them to vocalise words by typing it on the screen.

NOVELTY

There are few mobile applications for Deaf and dumb like Deaf and Dumb through 4G applications. These techniques only enable communication between deaf and dumb through sign language using mobile phones. The mobile

application which proposed in helps to make recognition of sign language. Mobile-based Deaf and Dumb Interaction System project in proposed mobile application that enables the needs of deaf and dumb developing a voice-activated mobile which would convert their sign language into messages that may be read by other users, this message can also converted to a voice.

FEASIBILITY OF IDEA

Without dialling number we can communicate to other like face to face communication. It does not require large amount of storage as it uses the Hand speak support through online. The sign words are signed in the same order as letters appear in English alphabets. This project prepares individuals to work as interpreter/translators facilitating and mediating communication between Deaf/Dumb and hearing people.

BUSINESS MODEL

The technology used are, Motion gesture, Touchless, Infrared Array, Ultrasonic Technology, 2D camera based technology, 3D vision technology. Lip-reading recognition for people with a hearing impairment, Real-time captioning or translations for people with a hearing impairment or even people who don't speak the language. The system contains Real time functioning, Portable, Doesn't damage through use. It provides all the data needed more accurately as it also provides fingers movement data. Most deaf people use a combination of sign language, lip-reading and written communication to go about their daily lives. By using camera is that it removes that needs of sensors gloves and reduce cost from building the system.

SOCIAL IMPACT

Deaf and dumb gesture recognition system is an inexpensive device. It is also very efficient device when compared to the existing devices**.** The main objective of this project is to achieve communication of deaf-mute people like a normal person. It allows deaf and dumb people to communicate with others. It is a best device for these people to overcome their disability. They can express their views to others.

SCALABILITY OF SOLUTION

GTTS It is a Python library and CLI tool to interface with Google Translates text-to speech API. Writes spoken mp3 data to a file, a file-like object (byte string) for further audio manipulation, or studio. Implementation on Android platform for smart phones and tablets PCs. Read and write images and detection of images for extracting its features. Detection of shapes like Circle, rectangle etc. in an image, Detection of coin in images. Image processing works with text recognition in images. e.g. Reading Number Plates, Modifying image quality and colour. This describes a project target audience and its user interface, hardware and software requirements. It defines how the client, team and audience see the project and itsfunctionality.