LITERATURE SURVEY

Real-Time Communication System Powered by AI for Specially Abled

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[1] Bigham, J. P., Jayant, C., Miller, A., White, B., & Yeh, T. (2010, June). VizWiz::Locate It-enabling blind people to locate objects in their environment. In 2010 IEEE Computer Society Conference on Computer Vision and Pattern Recognition-Workshops (pp. 65-72). IEEE.

The sixth sense is a multi-platform app for aiding the people in need that is people who are handicapped in the form of lack of speech (dumb), lack of hearing (deaf), lack of sight (blind), lack of judicial power to differentiate between objects (visual agnosia) and people suffering from autism (characterized by great difficulty in communicating and forming relationships with other people and in using language and abstract concepts). Our current implementation of the product is on two platforms, namely, mobile and a web app. The mobile app even works for object detection cases in offline mode. What we want to achieve using this is to make a better world for the people suffering from disabilities as well as an educational end for people with cognitive disabilities using our app. The current implementation deals with object recognition and text to speech and a speech to text converter .The speech to text converter and text to speech converter utilized the Web Speech API (Application Program Interface) for the website and text to speech and speech to text library for the mobile platform. The object recognition wouldn't fetch enough use out of a website. Hence, it has been implemented on the mobile app utilizing the Firebase ML toolkit and different pre-trained models, which are both available offline as well as online.

[2] G. Eason, B. Noble, and I. N. Sneddon, "On certain integrals of Lipschitz-Hankel type involving products of Bessel functions," Phil. Trans. Roy. Soc.
[3]London, vol. A247, pp. 529–551, April 1955.(references) Sohail Abid, Shahid Abid, Tafzeel Ahmed, "Mobile Application for Disabled People" in International Journal of Modern Computer Science ISSN: 2320-7868 (Online) Volume No.-1, IssueNo.-1, February 2013

The overall purpose of the research is to locate rest rooms and keep hygiene in consideration for those who are specially- abled. The app will be designed with the assistance of Artificial Intelligence and Machine Learning, providing navigation, every step of the way which will be susceptible to use and comprehend. People with having disabilities implies that having fundamental difficulty accomplishing aspects. They are of numerous types like physical disability in nature, due to amputation inability to walk, sensory like blindness, hearing impairment with the assistance of this app, this gap can be filled. The problems faced by specially abled people have been taken into consideration creating a balanced platform for them. Utilizing the necessary tools and functions required for enabling them to locate and understand where the restrooms are, keeping in mind hygiene and safety factors. Certain parameters are taken into consideration such as voice recognition, Maps Live feature, magnifier, sign language interpretation, hands-free settings, and many more features.

They could converse or speak and reach their destination with the support of the virtual assistant of a very specialized navigation system designed especially for them with a simple user interface which is easy to interpret and work efficiently according to the needs of the user.

[3] Mahasak Ketcham, Vassana Inmoonnoy, " The Message Notification for Patients Care System Using Hand Gesture Recognition," 2017International Conference on Digital Arts, Media and Technology(ICDAMT), Chiang Mai, Thailand, 2017, doi:

In recent times, there are more number of people prone to disabilities due to various factors. To alleviate the life of differently abled people, we propose a project which us eshand gestures to operate devices in the surrounding. The need for human assistance is reduced which also reduces the financial burden on the patients. We have used the concept of computer vision to recognize hand gestures and perform the function of operating devices. Each hand gesture is assigned with a predefined function to execute a certain task.

[4] O. A. Ruşanu, L. Cristea and M. C. Luculescu, "Simulation of a BCISystem Based on the Control of a Robotic Hand by Using Eye-blinksStrength," 2019 E-Health and Bioengineering Conference (EHB), Iasi, Romania, 2019,PP.1-4

Many assistive technologies implemented to help the disabled people. The purpose of this research is to design and implement a new mechanism for disabled people which can be used as a helping hand. Generally, disabled people depend onothers to live their lives. Our target is to make a robotic system that has different characteristics to help the physically challenged people. The robot will be able to move in any direction. An open-source Android application is used to control the robot via Bluetooth. The robot responds to move commands in the forward, backward, left, and right directions. A disabled person, especially those who cannot walk will be able to send this robot any where. The project also implements a robotic arm with pick and place capability. It is able to pick any object and carry it and place it to the required position. The robotic arm is designed such that it can be controlled by a number of different mechanisms, namely a smart phone as the remote control, or human voice command or an RF controller. Disabled people can use any one of these methods according to his or her comfort. The robot al souses an IP camera for video observation as well as video communication with others.

[5]White, J.J.: Fairness of AI for people with disabilities: problem analysis and interdisciplinary collaboration. ACM SIGACCESS Access. Comput. 125, 1 (2020)

Much has been written about the potential of artifcial intelligence (AI) to support, and even transform, the lives of disabled people. It is true that many advances have been made, ranging from robotic arms and other prosthetic limbs supported byAI, decision support tools to aid clinicians and the disabled themselves, and route planning software for those with visual impairment. Many individuals are benefting from the use of such tools, improving our accessibility and changing lives. But what are the true limits of such tools? What are the ethics of allowing AI tools to suggest diferent courses of action, or aid in decision-making? And does AI ofter too much promise for individuals? I have recently undergone a life changing accident which has left me severely disabled, and together with my daughter who is blind, we shall explore the day-to-day realities of how AI can support, and frustrate, disabled people. From this, we will draw some conclusions as to how AI software and technology might best be developed in the future.