Real time Communication by AI for disabled people

Communication plays a significant role in making the world a better place. Communication creates bonding and relations among the people, whether persona, social, or political views. Most people communicate efficiently without any issues, but many cannot due to disability. They cannot hear or speak, which makes Earth a problematic place to live for them. Even simple basic tasks become difficult for them. Disability is an emotive human condition. It limits the individual to a certain level of performance. Being deaf and dumb pushes the subject to oblivion, highly introverted. In a world of inequality, this society needs empowerment. Harnessing technology to improve their welfare is necessary. In a tech era, no one should be limited due to his or her inability. The application of technology should create a platform or a world of equality despite the natural state of humans.

For the last few decades, the use of predictive text has been a popular option for those with disabilities. Disabled people are using predictive text to communicate with friends, family, and work colleagues. Words that they once could not say aloud are now at their fingertips. 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.

There exists an idea like D-talk sign language recognition system for people with disabilities using machine learning and image processing. This shows how artificial intelligence is being used to help people who are unable to do what most people do in their everyday lives. Aligned with communication, D-talk is a system that allows people who are unable to talk and hear to be fully understood, allowing them to learn their language more easily and also for the people that would interact and communicate with them. This system provides detailed hand gestures that show the meaning at the bottom so that everyone can understand them. This research teaches readers about the system and what it can do for people who are struggling with what they are not capable of, as well as the technical terms used to describe how the system works.