Conversational Assistive Technology of Visually Impaired Person for Social Interaction

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Abstract : Assistive technology has been developed to support visually impaired people in their social interactions. Conversation assistive technology is designed to enhance communication skills, facilitate social interaction, and improve the quality of life of visually impaired individuals. This technology includes speech recognition, text-to-speech features, and other communication devices that enable users to communicate with others in real time. The technology uses natural language processing and machine learning algorithms to analyze spoken language and provide appropriate responses. It also includes features such as voice commands and audio feedback to provide users with a more immersive experience. These technologies have been shown to increase the confidence and independence of visually impaired individuals in social situations and have the potential to improve their social skills and relationships with others. Overall, conversation-assistive technology is a promising tool for empowering visually impaired people and improving their social interactions. One of the key benefits of conversation-assistive technology is that it allows visually impaired individuals to overcome communication barriers that they may face in social situations. It can help them to communicate more effectively with friends, family, and colleagues, as well as strangers in public spaces. By providing a more seamless and natural way to communicate, this technology can help to reduce feelings of isolation and improve overall quality of life. The main objective of this research is to give blind users the capability to move around in unfamiliar environments through a user-friendly device by face, object, and activity recognition system. This model evaluates the accuracy of activity recognition. This device captures the front view of the blind, detects the objects, recognizes the activities, and answers the blind query. It is implemented using the front view of the camera. The local dataset is collected that includes different 1st-person human activities. The results obtained are the identification of the activities that the VGG-16 model was trained on, where Hugging, Shaking Hands, Talking, Walking, Waving video, etc.

Keywords : dataset, visually impaired person, natural language process, human activity recognition
Conference Title : ICCSMLI 2024 : International Conference on Computer Science, Machine Learning and Statistics
Conference Location : Vancouver, Canada
Conference Dates : May 20-21, 2024