

Using Near Field Communication Technology with Voice Recognition to help Visually Impaired People in Clothes' Selection

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Abstract:

Visually impaired People face significant challenges like reading and dressing, impacting their independence. Clothing selection is difficult due to the reliance on visual cues and inaccessible information on labels. Therefore, more advanced solutions are needed to support independent clothing selection. The research aims to develop a voice recognition system to help visually impaired people choose their clothes. A preliminary survey, conducted through personal interviews with eight visually impaired participants, gathered insights into how they select and care for their clothing. The survey identified their needs and preferences, which informed the content to be included on NFC Labels. The participants expressed a preference for receiving this information through voice recordings, enabling them to independently select their clothing.

Both of the following were used for the Voice Recognition System: Voice Labels on NFC Label on Samsung Phones, and NFC Tools application on other phones that support NFC technology to attach the voice record link to the NFC Label. A survey was conducted on the use of mobile phones and NFC technology in Clothes' Selection through voice recognition found that participants agreed on the clarity and ease of the voice descriptions. The voice records effectively conveyed details about clothing specifications, and assisting individuals in choosing and caring for their clothes independently. This approach significantly supported their autonomy and reduced reliance on others. The study recommends expanding the use of NFC technology with voice recognition among visually impaired individuals and encouraging clothing stores to adopt this technology to support independent clothing selection.

Keywords:

Visually Impaired People, Near Field Communication, Voice Recognition, Clothes' Selection

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