ABSTRACT

This research focuses on the development of a mobile application called NetraLens, aimed at improving information accessibility for individuals with visual impairments (blindness). The application utilizes generative Artificial Intelligence (AI) and Optical Character Recognition (OCR) technologies to recognize and read text from various sources, including printed documents, images, and everyday objects. The research involves a thorough analysis of user needs, user-friendly interface design, and testing the application with visually impaired users. The findings show that NetraLens is effective in helping visually impaired individuals access information, enhancing their independence, and creating broader opportunities for participation in society. This research highlights the potential of generative AI in creating inclusive and empowering technological solutions for individuals with disabilities.

Keywords: Visual Impairment, Generative AI, Accessibility, Mobile Application