

Vision Aid: Developing An Assistive Mobile Application for Visually Impaired Individuals

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Abstract: *Vision Aid is a cutting edge smartphone software that combines several assistive technologies into a unified platform to help visually impaired individuals. Integrating Computer Vision algorithms this project makes use of Bing Maps API for Step by Step navigation, Tesseract OCR for text recognition, YOLO (You Only Look Once) for real time object detection and CLIP (Contrastive Language-Image Pre training) for scene description.*

It offers voice commands, audio feedback for a more improved day to day life hence improving self-confidence while empowering independence to the users. This journal provides a thorough description of Vision Aid the development process, methodology, evaluation results and shows the potential for future improvements with a goal to advance mobile accessibility for visually impaired individuals..

Keywords: Computer Vision, Object Detection, Visually Impaired, TensorFlow Lite