

Smart Assistive System for Visually Impaired using PI

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Abstract: *Visually impaired individuals face significant challenges when navigating and engaging with their surroundings independently. Our solution, "Smart Assistive System for visually Impaired using pi" employs a Raspberry Pi and camera for real-time image capture, precise object classification (with over 90% accuracy), and auditory feedback. The project addresses a pressing need for greater inclusion and accessibility for the visually impaired, offering a cost-effective and innovative solution that converts visual information into non-visual cues. The "Caption-Speak" system holds the potential to significantly enhance the independence, mobility, and overall quality of life for visually impaired individuals..*

Keywords: Visual Impairment, Raspberry Pi, Image Processing, Object Classification, Auditory Feedback, Accessibility, Deep Learning, User Interface, Real-time Processing.