

Introducing Next Generation Assistance: The Cutting-Edge Smart Cap for the Visually Impaired

Girish BG¹, Mohammed Bilal Zafer², Mohammed Thouqir³, Javeriya Taj⁴, Niveditha G S⁵

Department of Computer Science and Engineering

Sri Jagadguru Chandrashekaranaatha Swamiji Institute of Technology, Chikkaballapura, Karnataka, India

Abstract: Natural and manmade disasters pose a myriad of challenges, which are more severe for individuals with disabilities. Ordinarily to perform daily activities, the disabled get support from assistive technological devices and services; these are commonly disrupted during and after disasters. A proposed solution to support those with visual impairment is a cost-effective wearable 'Smart Cap'. The aim of Smart Cap is to make the life of visually impaired people easier, comfortable and independent. There is a need of cap which is affordable, portable and user-friendly. In this paper, we design and implement a system using Raspberry Pi which helps the blind and also the visually impaired people to navigate freely by experiencing their surroundings. It provides features like face recognition, image captioning, text detection and recognition, and online newspaper reading using Internet of things and deep learning.

Keywords: Assistive technological devices and services, Resilience, Disaster, Smart Cap, Internet of Things, Deep Learning

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