GOPALAN MYSORE ROAD CENTER

THIRD EYE – AN ALTERNATIVE FOR EXISTING SMART CANES

PROBLEM STATEMENT

Current smart canes are equipped with an integrated vibrator and a 1-meter range sensor that detects objects directly ahead, signaling the user through vibrations. However, the limited range and lack of defined object recognition present challenges for visually impaired individuals in identifying specific objects. The current design hinders their ability to discern and understand the nature of obstacles directly in their path, highlighting the need for improved object recognition and an extended detection range for a more effective and user-friendly navigation aid.

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SOLUTION

Developing a cost-effective alternative to the unaffordable smart cane technology for visually impaired individuals, we present a smart wearable hand device. Utilizing an ultrasonic/ping sensor and Arduino Uno, our innovative solution offers significant benefits. These include substantial cost reduction compared to smart canes, enhanced portability and reduced weight, improved obstacle detection range, and the convenience of being worn on the hand, aptly termed the "third eye." Future iterations may involve the introduction of Arduino Nano for further improvements in portability, weight, and cost.