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MULTI SENSOR ASSISTIVE DEVICE FOR VISUALLY IMPAIRED PERSON (13 SENSOR IN ONE DEVICE

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Problem Statement Understanding

"In 2009, on my way to work, I came upon a blind person struggling to cross the street. Though I helped him cross the street, I could sense the difficulties and dependence they eXperience in getting around. It encouraged me to use my eXpertise to create a smart device for people with disabilities so that their reliance on others might be eliminated. I tried this device on a visually impaired individual in my town, and based on his feedback, I made some changes to improve its effectiveness.

Proposed Solution

I spent a month developing two multi-sensor modern assistive gadgets, one for indoors and one for outside. I made a **GPS-enabled Smart Stick** that can detect obstacles from a distance of roughly 5-7 feet. A buzzer connected to it will alert the blind person concurrently with a vibration. This device can be attached with any stick.

Similarly, to ensure indoor safety, I made a **Multi-SenSor Device** equipped sensor to detect 13 objects such as –

1. Colour detector sensor (Black) – Able to detect Black Colour
2. Zebra crossing / Humps on road – User can detect Zebra Crossing or special marked line on road
3. Electric Line (LT/HT) - User able to presence of current .
4. Fire – Able to detect flame from 5 feet
5. Day Sensor – they can sense it s day or night

6. Metal Detector (Ferrous and non Ferrous) – all types of metal
7. UV Ray – Detect UV Ray
8. ProXimity – Check Obstacle
9. Mirror Glass Sensor – Check Whether it is a mirror glass or transparent glass
10. Transparent Glass Sensor - Whether it is a mirror glass or transparent glass
11. Moisture Sensor – able to detect water or any liquid
12. Door /Window Sensor- in day time they can sense wheather is the door/ window is open or closed
13. Magnet – for check Iron & Steel Only

All of these sensors will protect the visually impaired person's safety and help them navigate easily.

Impact / Use case

1. I feel my innovation will definitely helpful for Visually Impaired Person.
2. Reduce dependency.
3. Scalability/ Usability – High potential

Prototype

Multi Sensor Device 13 in 1

Obstacle Detection with GPS system