



**FINAL YEAR PROJECT REPORT**

**SMART STICK FOR BLIND PEOPLE**

In fulfillment of the requirement  
For degree of  
BS (COMPUTER SCIENCES)

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## DECLARATION

We hereby declare that this project report is based on our original work except for citations and quotations which have been duly acknowledged. We also declare that it has not been previously and concurrently submitted for any other degree or award at Bahria University or other institutions.

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## SMART STICK FOR BLIND PEOPLE

### ABSTRACT

According to a survey conducted in 2020, approximately 39 million individuals worldwide are blind, while 237 million have MSVI which is an abbreviation of Moderate to Severe Vision Impairment. Major issue for blind persons is avoiding impediments on their way to their destination. Such folks require support from persons with good eyesight or from a regular walking cane. When you consider them, you'll see that they can't travel to their desired location without the assistance of others or a smart device. They confront numerous hurdles in their daily life. To address these and other issues experienced by blind people, we devised the idea for this system, which is to design and develop a smart stick that can assist them in their everyday tasks and allow them to travel more simply and confidently. This smart stick for blind persons is made up of a number of electronic components that allow it to function. Multiple ultrasonic sensors, a gyroscope, a GPS module, an LDR sensor, a water sensor, a fire sensor, and other electronic components are among them. Every component has its own significance like the ultrasonic sensor is helpful in detecting obstacles in the blind's way, gyroscope will be used to monitor the orientation of the stick in case of any sort of trouble, GPS module is used to send the blind's location to any of his relatives in case of an emergency, and the three sensors will be used to detect different events in order to give the blind an alert. We've also linked this smart stick to a smartphone application, to enhance its functionality and use.

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