**Abstract**

Blindness or visual impairment is a word used to describe those who are unable to see. They suffer from a lack of capacity to perform daily tasks such as strolling down the street, visiting friends or relatives, or doing anything else. As a result, the solution to this big difficulty is provided by constructing a stick that may assist the individual in walking securely without the worry of colliding with anyone on the road or any solid objects. We created a Smart blind stick that scans for objects in front of it and responds by vibrating the stick and emitting a warning sound using an ultrasonic sensor. Using Arduino NANO, this system is designed to deliver artificial vision and object detection. A buzzer will provide the user with all input. A buzzer is used in conjunction with a vibrator motor. Another goal of this technology is to create low-cost and efficient obstacle detection assistance for the blind, allowing visually impaired persons to do the same maneuvers as sighted people.

**Introduction**

One of the most significant problems for a completely or partially blind person is obstacle detection. So, a blind stick is a novel stick intended for visually impaired persons to aid in navigating. Using modern technology, our suggested smart blind stick enables visually impaired persons to travel with ease. The blind stick is made up of five major components: two ultrasonic sensors, an Arduino board, a buzzer, and a vibration motor. This technique begins by employing ultrasonic sensors to identify impediments ahead through ultrasonic vibrations. When an obstruction is detected, the sensor reports that fact to the microcontroller. As a microcontroller, we utilized an Arduino NANO. The microcontroller then estimates sensor-to-obstacle distance. If the obstacle is not within a certain distance, the circuit has no effect. If the barrier is nearby, the microcontroller transmits operational voltage to the buzzer and vibration motor. The buzzer is transmitted in the circuit as a warning signal, with the frequency changing depending on the object's distance. Another advantage is that it helps the blind to identify whether the room is lit or dark. As a result, this system is beneficial for visually impaired persons since it uses a variety of components to identify obstacles.