# TEAM NAME: - WEDESIGN

# TEAM NO: - 08

# TITLE: - SMART HELMET

-For Blind People



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# SMART HELMET
## - For Blind People


❖ **ABSTRACT: -**

Visually blind people find difficulties detecting obstacles in front of them, during walking in the street, which makes it dangerous. The smart helmet comes as a proposed solution to enable them to identify the world around. In this project report we propose a solution, represented in a smart helmet with three ultrasonic sensors to detect obstacles in front side, right side and left side of the user, within a range of four meters. Moreover, LED is placed at the helmet for the sake of battery of the device is full. The Piezo(buzzers) are activated when any obstacle is detected. This proposed system uses the Arduino Uno R3 embedded system It is an open-source electronics platform based on easy-to-use hardware and software. Arduino boards are able to read inputs [light on a sensor, a finger on a button…etc.] and turn it into an output [ activating a motor, turning on an LED…etc.].

Piezo It is an audio signaling device, which may be mechanical, electronical, piezo. Typical uses of buzzers and beepers include alarm

devices, timers, and confirmation of user input such as a mouse click or keystroke.

The helmet is capable of detecting all obstacles in the range 4 meter during 39 ms and gives a suitable respect message empowering blind to move twice his normal speed because he/she feels safe. The smart helmet is of low cost, fast response, low power consumption, light weight and can be carried easily.