

## Students in Chandigarh design smart glasses for visually impaired

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**Patent rights for this unique device have been filed**



Simplifying lives of visually impaired people, two Chandigarh University students, Amit Ranjan and Simran Thakur, have developed first-of-its-kind Smart Glasses which will help visually impaired people in avoiding accidents by ensuring hassle-free obstacle detection for easy movement at public places.

Amit Ranjan and Simran Thakur have won 1st prize for "Building Smart Glasses for the Blind" project from Indian Institute of Technology Ropar. These smart glasses were also displayed at Chandigarh University's Projects Expo and Engineers Day.

As over 88 per cent of visually impaired people (blind) experience accidents during their lifetime according to a research paper published in a renowned international journal, the Smart Glasses would help visually impaired people in safe navigation in their daily life.

These smart glasses have Arduino Nano, ultrasonic sensor, buzzer, haptic feedback motor, lithium-ion battery, step-up module, connecting wire and charging module.

The ultrasonic sensor detects the surrounding objects and sends the data to the Arduino Nano. When an obstacle is within a certain range, the Arduino Nano activates the buzzer and haptic motor. The buzzer then sends auditory signals and the haptic motor generates tactile signals, letting the user know the position of the obstacle. The charging module allows the battery to be charged safely. This in turn helps the blind people to detect obstacles in their path and navigate safely. These two innovative students have filed to get patent rights for this unique device.