

عنوان مقاله:

Design and implementation of smart cane's electronic board based on sonar technology

محل انتشار:

دومین همایش ملی پژوهش های نوین در مهندسی و علوم کاربردی (سال: 1398)

تعداد صفحات اصل مقاله: 16

نویسنده:

S. A. Aghvami - Department of Electricity and Computer, Payame Noor University, PO BOX ۱۹۳۹۵-۳۶۹۷, Tehran, IRAN

خلاصه مقاله:

The most common tool utilized to help the blind is a conventional cane which has limited features and therefore it is difficult to be used as a mobilization tools. In this research, we have designed and implemented an electronic board of a smart cane or glove which can help visually impaired people to detect the obstacles around them. An electronic board uses a microcontroller to get data from ultrasonic sensor to determine the distance from the cane to the nearest obstacles. Whenever user is walking to an area where having obstacles around and the distance between user and obstacle is shorter than a predefined threshold, the vibration motor and buzzer attached to the cane will vibrate and sound with the intensity in inversely proportional with the value of the distance. The smart cane is also integrated with light detection sensor which allows the user to sense the amount of light using variable sound alert

کلمات کلیدی:

smart cane, microcontroller, ultrasonic sensor, light dependent resistive sensor

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1034516>

