

Arduino Based Smart Blind Stick

Aayush Saini¹, Harjot Singh², Manvendra Singh³, Prajwal Dutta⁴

Department of Electrical & Electronics Engineering
Dronacharya College of Engineering, Gurugram, India

Abstract: *In today's world, there are a huge number of visually impaired people who find difficulties detecting obstacles in front of them, while walking in the street, which makes it dangerous. The smart stick comes as a proposed solution to enable them to identify the world visually impaired people suffer from serious visual impairments preventing them from travelling independently. Accordingly, they used a variety of tools and techniques to provide assistance in their mobility. One of these techniques is to get trained by orientation and mobility specialist who help them to move on their own independently and safely depending on their other remaining senses. Which is very costly and not all can afford. Many techniques have been developed to enhance the mobility of blind people which rely on signal processing and sensor technology. These devices have a similar operation the radar system that uses ultrasonic waves or sonar in order to detect the obstacles. The distance between the person and the obstacles is measured by the time the wave travelled. However, all these pre-existing systems just informs the blind person of the presence of an object which is present at a certain distance in front of or near to them. Information about the object characteristics would provide an additional knowledge to the blind..*

Keywords: Blind Stick

REFERENCES

- [1]. Dada Emmanuel, Gbenga, Arhyel, Ibrahim Shani , Adebimpe Lateef, Adekunle . “Smart walking stick for visually impaired people using ultrasonic sensor and Arduino”. Department Of Computer Engineering, University Of Maiduguri, Borno State, Nigeria. International journal of innovative research in electrical, electronics, instrumentation and control engineering vol. 4, issue 3, March 2016.
- [2]. Sathya, S.Nithyaroopaa, P.Betty, G.Santhoshni, S.Sabharinath, M.J.Ahanaa smart walking stick for blind person. Department of Computer Science and Engineering, Kumara guru College of Technology Coimbatore. Coimbatore International Journal of Pure and Applied Mathematics Volume 118 No. 20 2018, 4531-4536.
- [3]. M Narendran, SarmisthaPadhi, Aashita Tiwari, “the third eye for the blind using Arduino and ultrasonic sensor. Department of Computer Science & Engineering, SRM Institute of Science & Technology Ramapuram, Chennai, Tamil Nadu, India ,National Journal of Multidisciplinary Research and Development ISSN: 2455-9040 Volume 3; Issue 1; January 2018; Page No. 752-756 .
- [4]. D.Sekar, S.Sivakumar, P.Thiyagarajan, R..Premkumar, Vivekkumar,” Ultrasonic and voice based smart stick”. SriEshwar College of Engineering .International Journal Of Innovative Research In Electrical, Electronics, Instrumentation And Control Engineering Vol. 4, Issue 3, March 2016.
- [5]. Jayakumar, S.Magesh ,K.Prasanth, P.Umamaheswari, R.Senthilkumar,”smart walking stick for visually impaired people”. Dept.of EEE, Erode Sengunthar Engineering College. International Journal of Advanced Research in Basic Engineering Sciences and Technology (IJARBEST) Vol.3, Special Issue.24, March 2017.
- [6]. Mohammad Hazzaz Mahmud, Rana Saha, and Sayemul Islam, “Smart walking stick - an electronic approach to assist visually disabled persons”, International Journal of Scientific & Engineering Research, Volume 4, Issue 10, October-2013.