Review of: "Design and Realization of a Low-Cost Smart Walking Aid for Visually Impaired and Blind People"

Raffaele Guida[1]

1 Northeastern University

Potential competing interests: No potential competing interests to declare.

This article proposes the design and implementation of a smart stick for visually impaired people that includes features to detect obstacles, including the presence of water, and send feedback to the user.

The article is well written, easy to follow and the use of English is correct.

Unfortunately, the chose topic is not novel, has already been proposed multiple times in the literature with very similar implementations. Here are just a few examples:

Kang, Sung-Jae, Young Ho, and In Hyuk Moon. "Development of an intelligent guide-stick for the blind." Proceedings 2001 ICRA. IEEE International Conference on Robotics and Automation (Cat. No. 01CH37164). Vol. 4. IEEE, 2001.

Sen, Arnesh, Kaustav Sen, and Jayoti Das. "Ultrasonic blind stick for completely blind people to avoid any kind of obstacles." 2018 IEEE SENSORS. IEEE, 2018.

Chavan, Prashik, et al. "Smart Blind Stick." 2022 6th International Conference On Computing, Communication, Control And Automation (ICCUBEA). IEEE, 2022.

Moreover, this article is not of scientific quality, mostly because it does not contribute to the field and does not propose an innovative device/idea. The combination of multiple sensors and actuators with a microcontroller for basic signal processing does not constitute scientific novelty.

The cited articles in the related work section are too few and too old. The authors should compare their proposed system with the cited ones and point out the limitations of the existing technology (which is minimally done only for a couple of related works).

The quality of the figures is also not acceptable for a paper aiming for publication.