A walking aid for the visually impaired with an Arduino-based Mini LiDAR TF SENSOR

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ABSTRACT

The number of cases of blindness in Indonesia ranks second in the world, based on information from the WHO in 2010 of the 45 million people in the world who are blind, 2.5 million are Indonesians. In order to support activities for people with visual impairments, walking aids for people with visual impairment are needed which is a technology tool to help navigate blind people so that they can carry out mobility like normal people. This walker uses an Arduino microcontroller and its distance detection uses a TF Mini LiDAR sensor, the design of this walker uses a stick frame and 3 Mini LiDAR TF sensors located at the bottom of the stick while the electronic control system section is above the stick. This tool is also capable of reading distances of up to 12 meters with a minimal error rate so that when used it can minimize collisions between the user of this tool and surrounding objects.

Keywords: Blind, TF Mini LiDAR