

**A SAFE SRI LANKAN CURRENCY DETECTION APPLICATION
USING IMAGE CLASSIFICATION FOR VISUALLY HANDICAPPED
PEOPLE UNDER COVID-19 SITUATION**

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Abstract

In Sri Lanka nearly 1.7% people are suffering from blindness. They are struggling on their own to sustain their day to day life. Identifying objects is the hardest thing for them without vision. Normally, visually handicapped people identify objects by touching. When they deal with currency (notes and coins) they face a lot of problems due to the minute size difference among the currency. Government provides a series of embossed dots on notes. And also visually impaired people use a small money identifier card to quickly measure and distinguish money. Due to the COVID-19 blind people have to reduce contact with surfaces. Since money is one of the medium to spread covid-19 virus among people. Due to the prevailing COVID-19 situation they have to wear hand gloves in some occasions. Which reduces perception of sense of touch. This study aims to propose an application to detect the Sri Lanka currency for visually handicapped people using image classification. The blind people can capture money via camera using this application, the value of money will be pronounced in Sinhala, Tamil and English. Various money detecting devices used in the world, but they are not suitable for Sri Lanka due to the high cost. But nowadays most of the handicapped people use smart phones, so this smart phone application can be used by everyone free of charge. This system is trained using thousands of images and tested more than hundred times. The application has 94% average accuracy. It is anticipated that the proposed study can aid blind people and help to minimize COVID-19 spread by them and protect them.

Keywords: Visually Handicapped, COVID-19, Sri Lankan Currency, Safety, Image Classification, Smart Phone Application