**Establishment of the Currency Detector for the Visually Impaired**

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**Abstract**

For a person with normal vision, recognition of paper currency is an easy task, but this is not the

case for a visually impaired person as the latter faces a lot of difficulties in their day-to-day

involvements with monetary transactions. They not only have difficulty in recognizing the paper

currencies due to the similarity of paper texture, but also the size between different categories of

currency notes. Financial institutions like banks can afford expensive hardware such as

Automatic Teller Machines (ATMs), automatic banknote sorters, to resolve the issue of currency

recognition, but for common people, especially the visually impaired persons, accessing such

expensive hardware is a daunting challenge. The aim of the research was to provide visually

impaired persons with a cost-effective android application solution to detect currencies and

objectives to establish the effectiveness of the current currency detector applications, challenges

faced by users of current currency detectors, and develop a viable currency detector for now and

future generations. The study centered on currency recognition software that helps distinguish

different currency notes. Development techniques utilized incorporated image foreground

segmentation, histogram enhancement, area of interest (ROI) extraction, and template matching

primarily based on the cross-correlation among the captured picture and the records set. The

system will reduce cases of visually impaired persons being coned and limit transactions

involving fake currencies, while acting as a benchmarking tool for emerging research and

discoveries.

Keywords: *Establishment, Currency Detector, Visually Impaired*