



Indian Currency Recognition and Verification Using Image Processing

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ABSTRACT

Banknote identification systems, with their wide applications in Automated Teller Machines (ATMs), vending machines and currency recognition aids for the visually impaired, are one of the most widely researched fields today. The present paper proposes a novel technique for recognition of Indian currency banknotes by adopting a modular approach. proposed technique has been evaluated over a large data set for recognition of Indian banknotes of various denominations and physical conditions including new notes, wrinkled notes and non-uniform illumination.

INTRODUCTION

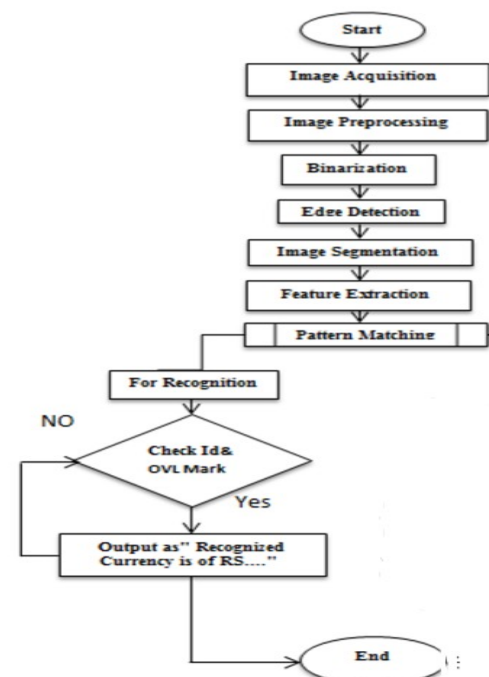
All economic activities relating to production, distribution, consumption etc. can be motivated by money. Savings and investments can be made in the form of capital information. Thus, money is important in the dynamic society for everything. As our economy is moving towards the development there are many other things which are downsizing it. One of those things is production and usage of forged bank notes. The only solution that is presently available for common man to detect counterfeit currency is Fake Note Detector Machine.

DEVELOPMENT & METHODOLOGY

1. Image Acquisition
2. Pre-processing
3. Binarization
4. Edge Detection
5. Image Segmentation
6. Feature Extraction

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RESULT

A test data set consisting of 300 images of Indian banknotes (50 images of each denomination), including new and wrinkled notes was created for the evaluation of the proposed algorithms for the detection of currency-note features. The proposed methods for recognition of currency denomination through identification mark detection and colour matching techniques were evaluated over the data set of 300 images of Indian Currency Notes. For both the features, the system recognized the currency denomination with 100% accuracy.

CONCLUSION

An innovative model for currency recognition system using digital image processing has been discussed to improve efficiency by producing more accurate results and increase success rates. The proposed technique has been evaluated over various denominations and physical conditions including new notes, wrinkled notes and non-uniform illumination. Various image processing methodologies have been adopted to design and build an efficient recognition system. By using digital image processing, analysis of paper currency is more efficient on the basis of cost and time consuming other than existing system.