IJARSCT
International Journal of Advanced Research in Science, Communication and Technology
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
ISSN: 2581-9429
Volume 5, Issue 2, December 2025
Impact Factor: 7.67

Fake Currency Detection

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Abstract: *The rising circulation of fake currency notes has posed serious problem to the economy. It has become essential for detection of counterfeit Indian currency notes by using fool-proof detection techniques. Conventional approaches for fake detection (e.g. manual check and UV lamp identification) are usually slow, inaccurate and largely relying on professional experience. In this paper we introduced an automatic Fake Currency Detection System which uses the image processing & feature extraction techniques for distinguishing genuine and fake currency notes. The automated process uses sophisticated techniques like colour analysis, edge detection and pattern recognition to study the physical properties of currency notes. Using React. js for the frontend and Node. js Backend Powered by TensorFlow.js for back-end, this platform can take image from users of the currency note and detect it in real time. The proposed system is effective by the successful identification of counterfeit notes with high levels of accuracy, decrease the need for manual examination and grater detection speed. Some proposed improvements are the use of deep learning models to deal with more intricate counterfeit patterns, mobile version for real time detection and multiple- currency support. This method provides a scalable, rapid and robust solution to an increasing problem of financial fraud.*

Keywords: Fake Currency Detection, Image Processing, Edge Detection, Feature Extraction, Machine Learning, Financial Fraud Prevention

DOI: 10.48175/IJARSCT-30389