Abstract

Nowadays as many counterfeit banknotes are manufactured and circulated in the global market, which results in significant damage and harm to society. Recognizing the currency's originality is a very difficult task for a general person. Due to advancement in generating highly accurate fake currency, there are several techniques available, such as automatic sorting of banknotes in payment facilities, automated payment machines or sales machines, which consists of several tasks such as identification of banknote type, classification of recirculation fitness, and detection of fake banknotes. Banknote identification is the most important approach, based on an image processing system. There are many techniques used in the classification of banknotes by different countries that have been conducted experiments on separate image data sets of each country. Deep learning is a machine learning technique which analyzes and learns the features of the original note. Using the neural networks, the most important aspect is to find more essential features. In the age of big data, in which vast amounts of data must be processed for any application in the real world, the superior techniques are deep learning. In this study, banknotes from various countries are examined by extracting their minute features in
Forged Multinational Currency Identification and Detection System using Deep Learning Algorithm

carefully and analyzing them using deep learning. Proposed system recommended a Convolutional Neural Network algorithm to detect Forged banknote using dataset of multiple country currency. This approach is chosen to achieve high accuracy with good performance with respect to loss and accuracy in training and validation in terms of huge dataset. So it helps individuals to avoid personal economic damage caused by counterfeiters.

References


Index Terms

Computer Science Algorithms
Keywords

Deep Learning, Currency Recognition, Currency Identification