Seminar Abstract

Counterfeit Bill Detection Algorithm using Deep Learning

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The advance of scanner and printer technologies has increased the possibility of making counterfeit bills that cannot be distinguished by human and simple detecting devices. The rate of finding counterfeit bills by individuals is very low because counterfeit bill detectors require too high a cost. In this paper, we propose a deep learning-based algorithm to detect counterfeit bills through general-purpose scanners that can be used by individuals to prevent personal monetary damages caused by counterfeit bills. The proposed algorithm adopts a convolutional neural network model that consists of 2 convolutional layers and 2 fully connected layers. In convolutional layers, rectified linear unit and max-pooling are applied. In fully connected layers, drop out is applied. Using original bills and counterfeit bills printed by various manufacturers' printers, experiments are performed. Also, the proposed algorithm is compared with previous feature-based algorithms to show the outstanding performance.

Bibliography

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