Utilization of Naive Bayes for Defect Detection in TFT-LCD Glass Substrates

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In this study, a new machine vision methodology is represented for defect detection on TFT-LCD glass substrates. For this reason, features were extracted by computation of wavelet co-occurrence signature method from reflection images. The Naïve Bayes (NB) classification model as one of the most popular models because of its simplicity and computation efficiency was used for classification. Since data set should not have complex feature dependencies in using this model, we used principal component analysis (PCA). After using PCA, the first 12 principal components were retained as the features from 176 extracted features. The classification accuracy of naïve Bayes (86.75%) shows utilization of proposed approach in defect detection of TFT-LCD glass substrates could be a suitable alternative.