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(57) Abstract :

A system and method for deep trained classification of sensitive documents for robotic vision-based segregation, comprising an image dataset acquisition module for obtaining sensitive and non-sensitive documents; an image dataset pre-processing module for resizing and converting images to grayscale; a training and testing module employing deep learning or transfer learning for image classification, and a feature extraction module for extracting features from images. Machine learning or ensemble classifiers analyze documents based on extracted features, and a computer vision-based robot with a pre-trained model classifies sensitive and non-sensitive documents. A result analysis module applies optimal techniques or algorithms to provide classified documents to the computer vision-based robot. The system enables efficient and accurate classification of sensitive documents, with potential applications in secure document handling, storage, and transmission.

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