Real-time mask detection and face recognition using eigenfaces and local binary pattern histogram for attendance system

ABSTRACT

Face recognition is gaining popularity as one of the biometrics methods for an attendance system in an organization. Due to the pandemic, the common face recognition system needs to be modified to meet the current needs, whereby facemask detection is necessary. The main objective of this paper is to investigate and develop a real-time face recognition system for the attendance system based on the current scenarios. The proposed framework consists of face detection, mask detection, face recognition, and attendance report generation modules. The face and facemask detection is performed using the haar cascade classifier. Two techniques for face recognition were investigated, the eigenfaces and local binary pattern histogram. The initial experimental results and implementation at Kuching Community College show the effectiveness of the system. For future work, an approach that is able to perform masked face recognition will be investigated.