

A labVIEW design for frontal and non- frontal human face detection system in complex background

Abstract

Biometric identification has advanced vastly since many decades ago. It became a blooming area for research as biometric technology has been used extensively in areas like robotics, surveillance, security and others. Face technology is more preferable due to its reliability and accuracy. By and large, face detection is the first processing stage that is performed before extending to face identification or tracking. The main challenge in face detection is the sensitiveness of the detection to pose, illumination, background and orientation. Thus, it is crucial to design a face detection system that can accommodate those problems. In this paper, a face detection algorithm is developed and designed in LabVIEW that is flexible to adapt changes in background and different face angle. Skin color detection method blending with edge and circle detection is used to improve the accuracy of face detected. The overall system designed in LabVIEW was tested in real time and it achieves accuracy about 97%.