

Abstract

Face as a security system has a vulnerability to the spoofing attack because by falsifying faces using certain media such as photos or videos can fool the system. In this study, we proposed a spoofing detection system on human faces that good to distinguish spoof and non-spoof face using Low-Level Feature: Speeded-Up Robust Features (SURF) and Shape Analysis: Pyramid Histogram of Oriented Gradient (PHOG) as the feature extraction. We tested our method on 2 scenarios: intra-database and cross-database, using 4 different public datasets: MSU MFSD, NUA A Imposter, CASIA FASD, and Idiap Replay-Attack. We used Support Vector Machine (SVM) and k-Nearest Neighbors (k-NN) as classification.

Keywords: spoofing detection, SURF, PHOG, intra-database, cross-database.