

ABSTRACT

IMPLEMENTATION OF FACE RECOGNITION ON DOOR

Face recognition is one of many ways to access key on door. This is because the human face contains many unique features that can be used to distinguish humans from each other. The purpose of this final project is to apply a face identification system to access the door which is able to prevent face spoofing. The method used in this system were haar cascade classifier to detect faces, local binary pattern to extract features from the face, K-Nearest Neighbour as a classifier and eye-blink detection to avoid face spoofing. This system used Raspberry Pi as the processor and Python as the programming code. The test shows that, the face recognition process has an accuracy of 98.7% with a precision of 97.5%. But the face recognition process is still dependent on light. The results of the identification process have a good accuracy if done in a good light condition, but have a poor accuracy value if done in a bad light condition. In addition, the system will be able to identify faces better if the database is filled with different face positions.

Keywords: *eye-blink detection., face recognition, Local binary pattern, Open CV, Raspberry PI.*