

Face Recognition Door Lock System Using Raspberry PI

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Abstract: One of the crucial difficulties we aim to find in computer vision is to recognize items automatically without human interaction in a picture. Face detection may be seen as an issue when the face of human beings is detected in a picture. The initial step towards many face-related technologies, including face recognition or verification, is generally facial detection. Face detection however may be quite beneficial. A biometric identification system besides fingerprint and iris would likely be the most effective use of face recognition. The door lock system in this project consists of Raspberry Pi, camera module, relay module, power input and output, connected to a solenoid lock. It employs the two different facial recognition algorithms to detect the faces and train the model for recognition purpose. The Face Recognition Door Lock System using Raspberry Pi is an intelligent security solution designed to provide contactless, reliable, and automated access control. The system uses a Raspberry Pi as the central processing unit, integrated with a camera module to capture real-time facial images.

Keywords: Face recognition, raspberry pi, opencv