Abstract

The development of science is very rapid which makes us easier to do practical activity based on the emergence of technology which is able to control electronic devices in the house from a distance which is called Smart Home. Facial detection systems are also growing. The technology of controlling electronic devices using remote control is helpful in managing the electronic devices in order to control and monitor every human faces who entered the house. A system created to detect and recognize human faces is using a mini PC Raspberry Pi 3 with a camera module (webcam). Human face detection and recognition utilize a library in OpenCV, where it is used to detect, create databases and match new faces with databases. Face recognition will be a system user notification using the Telegram Bot app. Telegram Bot as remote control and receive notification from system. Out of 25 identification trials, the success rate or SR of face identification test was 84% and the False Accept Rate or FAR was 16%. Some important factors that influence the success rate of identifications are the position of the face and the intensity of the light during the process of making data train.
References


Index Terms

Computer Science

Image Processing

Keywords

Smart Home, Face Recognition, Telegram Bot.