

Abstract

In general, when a guest arrives, homeowners know from the sound of a conventional electric bell pressed by guests, but when the homeowner is not in the house, the homeowner does not know the whereabouts of guests who come. Based on these problems, the Internet-based Smart Doorbell of IoT (IoT) is designed to determine the arrival of guests through OpenCV detection with the Haar-cascade method and notifying smartphones on e-mail and sound notification by buzzer module inside the house. With the IoT-based Smart Doorbell, homeowners can find out guest arrival information even though the homeowner is not at home. The results of this study indicate that classification using upperbody recognition is better than face recognition with an average value of the detected time difference of 6.05 seconds at a delay of 30 seconds and 6.31 seconds at a delay of 60 seconds and 95% accuracy.

Keywords: Smart Doorbell, Internet of Things, smartphone, OpenCV, Haar-cascade