PROJECT REPORT

ON

IOT ACCESS CONTROL BASED ON FACE RECOGNITION

Submitted in partial fulfillment of requirement

for the award of the degree of

BACHELOR OF SCIENCE

IN

ELECTRONICS

OF

UNIVERSITY OF KERALA

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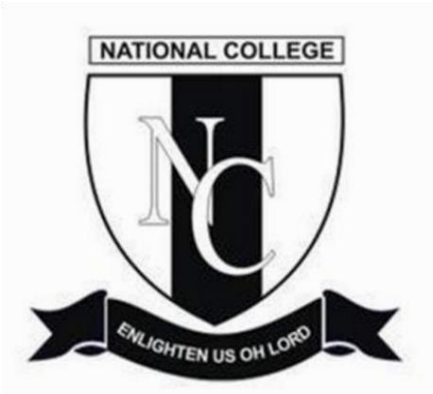

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DEPARTMENT OF ELECTRONICS

CERTIFICATE

*This is to certify that the project report entitled **"IOTACCESS CONTROL BASED ON FACE RECOGNITION"** is a bonafide recordof the work done by **A.AYANA, ANJU.S, JIYA JACOB, MEENU.S.M** of National College, Thiruvananthapuram towards the partial fulfillment of the requirement for the award of the degree of Bachelor of Science in Electronics of the University of Kerala during the period 2014-2017.*

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Principal

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IOT ACCESS CONTROL BASED ON FACE RECOGNITION

ABSTRACT

Smart home security control system has become indispensable in daily life. The design and development of a home security system, based on human face recognition technology and remotely monitoring technology, to confirm visitor identity and to control door accessibility has been reported in this paper. This paper describes about the implementation and deployment of wireless control system and accessibility in to a home environment for authenticated people only. A wireless network technique using Wi-Fi module based and image processing technique PCA based, dedicatedly make the security system alive as per the request. Wi-Fi module and electromagnetic door lock module combined operate the door accessibility has been designed and developed. Face detection and recognition algorithms, as well as a wireless interface are used to detect and identify visitors and send an email and/or an alert message about the current home environment status via GSM network automatically to the home owner's mobile phone or any communication devices.

The concerned authority can control the system through his/her mobile phone or any communication devices by sending AT Commands to GSM MODEM or by taking necessary actions for authentication through email, which is again password protected. Users can monitor visitors and control the door lock on active Web pages enhanced with JavaScript and HTML. This system finds a wide application in areas where physical presence is not possible all the time. The entire control system is built using ATmega328 microcontroller and tested for actual use in home environment.

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