

A Major Project report on
FACE RECOGNITION DOOR LOCK WITH SMS ALERT AND PASSWORD
SECURITY

Submitted to
Jawaharlal Nehru Technological University, Hyderabad
In partial fulfillment of the requirement for
The award of degree of

BACHELOR OF TECHNOLOGY
In
ELECTRONICS & COMMUNICATION ENGINEERING
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CERTIFICATE

This is to certify that the major project entitled **"FACE RECOGNITION DOOR LOCK WITH SMS ALERT AND PASSWORD SECURITY"** submitted to JNTUH is carried out by the following students of IV B. Tech in the partial fulfillment for the award of the B. Tech degree in Electronics and Communication Engineering during the academic year 2022-2023.

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ABSTRACT

Security and safety are top concerns in our digital age, whether it is the safety of our own homes or the security of the data. Doors serve as barriers that keep intruders out. In order to improve home security, a door security system is absolutely necessary. A face recognition based door unlock system is used to protect guarded areas. The ability to identify visitors entering the house is a crucial part of any home security system. In this project, the Face recognition module is incorporated. Here, the images of authorized people are captured and stored in the database. Once the person arrives at the door, his/her image is compared with images stored in a database. The door opens only when the person's image matches with the database. When an unauthorized person arrives, due to mismatch of images the door remains locked and gives a signal by a glowing red LED. Alternately, in case of emergency, the visitor can open the door by entering the manual pin provided by the admin. The developed project offers double factor authentication that leads to highly secure door locking contributing to a smart home concept. These features are obtained by integrating Arduino UNO, ESP32 CAM, L298N motor driver, GSM SIM900A and 4x4 matrix keypad. This module can be implemented in apartments, commercial buildings, and security required places like banks and corporate sectors etc. to keep unauthorized persons like thieves and other sorts of dangers at bay.



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