

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
BY

B. SHIRISHA	196Y1A0410
K. VASAVI	196Y1A0453
D. VATHSALYA	196Y1A0431
FARHA KHANAM	196Y1A0439

Under the esteemed supervision of

Mr. D. KOTESHWAR RAO
Assistant Professor



DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING
SUMATHI REDDY INSTITUTE OF TECHNOLOGY FOR WOMEN
(Approved by AICTE, New Delhi; Accredited by NBA; Affiliated to JNTU, Hyderabad)
Ananthasagar (Vill), Hasanparthy (M), Warangal-506371

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Rajan

PRINCIPAL

Sumathi Reddy Institute of Technology for Women
Ananthasagar (V), Hasanparthy (M)
WARANGAL - 506 371 (T.S.)



DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

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.

B. SHIRISHA

196Y1A0410

K. VASAVI

196Y1A0453

D. VATHSALYA

196Y1A0431

FARHA KHANAM

196Y1A0439


Mr. D. Koteswar Rao
Assistant Professor
Supervisor


Dr. K. Mahender
Associate Professor
Head of Dept., ECE





PRINCIPAL

Sumathi Reddy Institute of Technology for Women
Ananthasagar (V), Hasanparthy (M)
WARANGAL - 506 371 (T.G.)

Ananthasagar (Vill), Hasanparthy(M), Warangal-506371(T.G), Tel: 0870-2818301, 302, 303

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.



Rijan

Principal

Sumathi Reddy Institute of Technology for Women
Ananthasagar (V), Hasanparthy (M)
WARANGAL - 506 371 (TS)