



FINAL YEAR PROJECT REPORT

**DOOR SECURITY SYSTEM THROUGH
MULTIPLE FACE RECOGNITION**

**In fulfillment of the requirement
For degree of
BS (COMPUTER SCIENCES)**

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FALL-2022

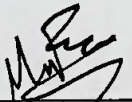
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We hereby declare that this project report is based on our original work except for citations and quotations which have been duly acknowledged. We also declare that it has not been previously and concurrently submitted for any other degree or award at Bahria University or other institutions.

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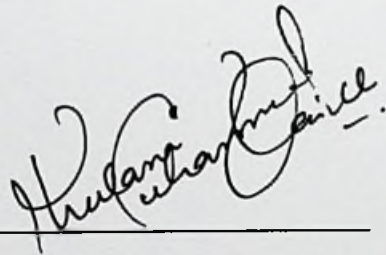
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We certify that this project report entitled **“DOOR SECURITY SYSTEM THROUGH MULTIPLE FACE RECOGNITION”** was prepared by **Namra and Muhammad Farooq** has met the required standard for submission in partial fulfilment of the requirements for the award of Bachelor of Computer Science at Bahria University.

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Specially dedicated to
my beloved mother and father

Namra

my beloved mother and father

Muhammad Farooq

DOOR SECURITY SYSTEM THROUGH MULTIPLE PATTERN RECOGNITION

ABSTRACT

ACKNOWLEDGEMENTS

We would like to thank everyone who had contributed to the successful completion of this project. We would like to express my gratitude to my research supervisor, Dr Ghulam Muhammad for his invaluable advice, guidance and his/her enormous patience throughout the development of the research.

In addition, we would also like to express my gratitude to our loving parent and friends who had helped and given me encouragement.

DOOR SECURITY SYSTEM THROUGH MULTIPLE FACE RECOGNITION

ABSTRACT

Security is a very big concern in today's time. With increasing security risks, the measures taken to ensure security need to evolve and adapt as well. Security is becoming an ever-increasing problem, not only in houses but also in many other places such as large facilities, industries etc. Key based or even thumb print based locks are starting to fail as they can be cracked very easily. Because of this, a new security system needs to be developed which does not have any of the weaknesses of both key based and fingerprint-based lock systems. A face recognition system is the best in this scenario because of its automation. It can do what any other lock can do but do it without any of the defects of its counterparts making it the best solution for this problem.

This project aims to create a system which can recognize when someone approaches a door, authenticate their identity, and then check their authorities to decide if the door should be opened for them or not. The system can recognize multiple people and opens the door when all of the detected people are both recognized and authorized.

The device will use a camera to detect and recognize the faces. The Facial detection system will be trained and implemented on python. The Face recognition model will be trained using OpenCV. This device can be used in Different domains such as housing societies for Front gate security, Industries, homes, buildings, or institutions with confidential areas to have tighter security and in cars to only allow the owner or the family of the owner to access the car.

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