

CCTV Network For Crowd Management, Crime Prevention
A PROJECT REPORT

Submitted by,

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Under the guidance of,

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**School of Computer Science and Engineering Presidency
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in partial fulfillment for the award of the degree of

BACHELOR OF TECHNOLOGY

IN

COMPUTER SCIENCE AND ENGINEERING.

At



PRESIDENCY UNIVERSITY

BENGALURU

MAY 2025

SCHOOL OF COMPUTER SCIENCE ENGINEERING

CERTIFICATE

This is to certify that the Project report "CCTV Network For Crowd Management, Crime Prevention" being submitted by "MOHAMMAD TRAVADI, GREESHMA REDDY, MUBARAK, VIGNESH G, ADITHYA R" bearing roll number(s) "20211CCS0086, 20211CCS0066, 20211CCS0054, 20211CCS0047, 20211CCS0041" in partial fulfillment of the requirement for the award of the degree of Bachelor of Technology in Computer Science and Engineering is a bonafide work carried out under my supervision.



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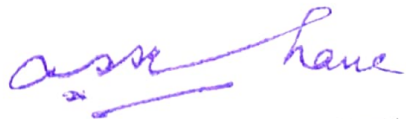


Dr. MYDHILI NAIR

Associate Dean

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Presidency University



Dr. SAMEERUDDIN KHAN

Pro-Vice Chancellor - Engineering

Dean -PSCS / PSIS

Presidency University

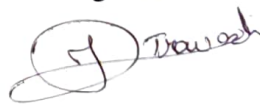

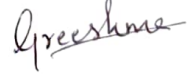

PRESIDENCY UNIVERSITY

SCHOOL OF COMPUTER SCIENCE ENGINEERING

DECLARATION

We hereby declare that the work, which is being presented in the project report entitled **CCTV Network For Crowd Management, Crime Prevention** in partial fulfillment for the award of Degree of **Bachelor of Technology in Computer Science and Engineering**, is a record of our own investigations carried under the guidance of **Dr. Vennira Selvi, School of Computer Science Engineering & Information Science, Presidency University, Bengaluru.**

We have not submitted the matter presented in this report anywhere for the award of any other Degree.

Student Name	Roll No	Signature
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ABSTRACT

The efficient administration of public safety in the face of growing dangers and crowded populations has emerged as a crucial issue in today's security environments. Intelligent systems must be integrated because traditional surveillance methods frequently have issues with scalability, reactivity, and real-time analysis. In order to enable real-time crowd monitoring and weapon detection, this project suggests a comprehensive Security Management Suite that makes use of cutting-edge computer vision techniques, particularly the YOLO (You Only Look Once) object detection framework. Security professionals may monitor and manage several detection modules at once thanks to the system's Python architecture and graphical user interfaces built using Tkinter and Custom Tkinter. The crowd management module evaluates real-time video feeds to detect and quantify human presence, issuing alerts upon surpassing defined crowd thresholds and identifying restricted area breaches. Complementarily, the weapon detection module employs deep neural networks to recognize and log the presence of potentially dangerous objects. Integration of features such as automated logging, alerting mechanisms, and multi-threaded processing ensures responsiveness and operational robustness. Preliminary evaluations indicate the system's potential in reducing response times, improving surveillance accuracy, and enhancing situational awareness. Future research may focus on refining detection algorithms, minimizing false positives, and incorporating advanced analytics to support predictive security operations.

ACKNOWLEDGEMENT

First of all, we indebted to the **GOD ALMIGHTY** for giving me an opportunity to excel in our efforts to complete this project on time.

We express our sincere thanks to our respected dean **Dr. Md. Sameeruddin Khan**, Pro-VC, School of Engineering and Dean, School of Computer Science Engineering & Information Science, Presidency University for getting us permission to undergo the project.

We express our heartfelt gratitude to our beloved Associate Deans **Dr. Mydhili Nair**, School of Computer Science Engineering & Information Science, Presidency University, and **Dr. S P Anandraj**, Head of the Department, School of Computer Science Engineering & Information Science, Presidency University, for rendering timely help in completing this project successfully.

We are greatly indebted to our guide **Dr. Vennira Selvi Professor** and Reviewer **Dr. Nihar Ranjan Nayak Assistant Professor**, School of Computer Science Engineering & Information Science, Presidency University for his inspirational guidance, and valuable suggestions and for providing us a chance to express our technical capabilities in every respect for the completion of the project work.

We would like to convey our gratitude and heartfelt thanks to the PIP4004 Capstone Project Coordinators **Dr. Sampath A K**, and **Mr. Md Zia Ur Rahman**, department Project Coordinators **Dr. H M Manjula (AP)** and Git hub coordinator **Mr. Muthuraj**.

We thank our family and friends for the strong support and inspiration they have provided us in bringing out this project.

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