

Dr. Nandini Arora

Assistant Professor

Department of English

University of Delhi

in

Department of English

University of Delhi

Dr. Nandini Arora

Assistant Professor

Department of English

University of Delhi



Centre for Internet of Things

WADHAWA INSTITUTE OF TECHNOLOGY & SKILLS, CHANAKAR (M.H.A. 1001)

Deemed to be university
Not affiliated with UGC/CSIR

July-Dec 2024

TURNITIN PLAGIARISM REPORT

Similarity Report

PAPER NAME

Amit SHSS app.pdf

AUTHOR

S G

WORD COUNT

3649 Words

CHARACTER COUNT

24480 Characters

PAGE COUNT

27 Pages

FILE SIZE

669.4KB

SUBMISSION DATE

Nov 19, 2024 5:48 PM GMT+5:30

REPORT DATE

Nov 19, 2024 5:48 PM GMT+5:30

● 19% Overall Similarity

The combined total of all matches, including overlapping sources, for each database.

- 11% Internet database
- 0% Publications database
- Crossref database
- Crossref Posted Content database
- 18% Submitted Works database

● Excluded from Similarity Report

- Bibliographic material
- Small Matches (Less than 10 words)

DECLARATION BY THE CANDIDATE

I hereby declare that the work entitled Smart Home Security System is my work, conducted under the supervision of Dr. Namita Arya, Assistant Professor, during the session Jun-Dec 2024. The report submitted by me is a record of bonafide work carried out by me.

I further declare that the work reported in this report has not been submitted and will not be submitted, either in part or in full, for the award of any other degree or diploma in this institute or any other institute or university.

Amit

Amit Kumar Prajapati
090110221012

Date: 19/11/2024

Place: Gwalior

This is to certify that the above statement made by the candidates is correct to the best of my knowledge and belief.

Guided By:

Dr. Namita Arya
90-90-100-24.

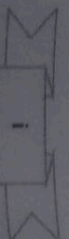
Dr. Namita Arya
Assistant Professor
Center for Internet of Things
MITTS, Gwalior

Departmental Project Coordinator

Dr. Nookala Venu
Assistant Professor
Centre for Internet of Things
MITTS, Gwalior

Approved by HoD

Dr. Praveen Bansal
Assistant Professor
Centre for Internet of Things
MITTS, Gwalior



PLAGIARISM CHECK CERTIFICATE

Thus is to certify that I, a student of B.Tech. in Internet of Things (IoT) have checked my complete report entitled "Smart Home Security System" for similarity/plagiarism using the "Turnitin" software available in the institute.

Thus is to certify that the similarity in my report is found to be _____ which is within the specified limit (20%).

The full plagiarism report along with the summary is enclosed.

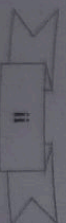
Amit

Amit Kumar Prajapati
090110221012

Checked & Approved By:

Soumyajit Ghosh
20/11/24

Dr. Soumyajit Ghosh
Assistant Professor
Centre for Internet of Things
MITTS, Gwalior



ABSTRACT

The "Smart Security System" is a comprehensive and innovative solution designed to enhance the security of residential properties. The project integrates advanced technology and modern security concepts to provide reliable and efficient protection.

The system is developed using Python and Flask, allowing seamless integration with various IoT devices, sensors, cameras, and access monitoring systems. A user-friendly interface is implemented, providing a secure and intuitive way to manage the system's operations.

The system is designed to be scalable and adaptable, allowing for future enhancements and integration with other smart home devices. The project demonstrates the potential of smart security systems to provide a safer and more secure living environment. The system's architecture is based on a modular design, allowing for easy integration with other smart home devices and services.

The system is designed to be scalable and adaptable, allowing for future enhancements and integration with other smart home devices. The project demonstrates the potential of smart security systems to provide a safer and more secure living environment. The system's architecture is based on a modular design, allowing for easy integration with other smart home devices and services.



ACKNOWLEDGEMENT

The full semester Project has proved to be pivotal to my career. I am thankful to my **Madhav Institute of Technology & Science** to allow me to continue my secondary/interdisciplinary Project as a curriculum requirement, under the provisions of the Curriculum Scheme approved by the Academic Council of the institute. I extend my gratitude to the Director of the institute, **Dr. R. K. Pandit** and Dean Academics, **Dr. Manjaree** for this.

I would sincerely like to thank my department, **Centre for Internet of Things**, for allowing me to explore this project. I humbly thank **Dr. Praveen Bansal**, Assistant Professor and Coordinator, Centre for Internet of Things, for his continued support during the course of the project, which eased the process and formalities involved. I am sincerely thankful to my faculty mentors. I am grateful to the guidance of **Dr. Namita Arya**, Assistant Professor, Centre for Internet of Things, for his continued support and guidance throughout the project. I am also very thankful to the faculty and staff of the department.

Amit

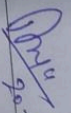
Amit Kumar Prajapati
090110221012
Centre for Internet of Things

CERTIFICATE

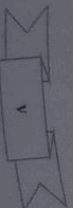
This is to certify that Arnit Kumar Prajapati, a student of Internet of Things (IoT), 5th Semester at Madhav Institute of Technology and Science, Gwalior, has successfully completed the Minor Project – I titled "Smart Home Security System" during the academic session 2024-25 under the guidance of Dr. Namita Arya, Assistant Professor.

The project, developed using HTML, Python, and YOLO, showcases the student's ability to design and implement a web-based application for Anonymous detection, addressing a real-world problem with practical and innovative solutions.

We commend the student's dedication and technical skills in completing this project.


20/11/24

Dr. Namita Arya
Assistant Professor



CONTENT

Declaration by the Candidate.....	i
Plagiarism Check Certificate.....	ii
Abstract.....	iii
Acknowledgement.....	iv
Certificate.....	v
Content.....	vii
Acronyms.....	viii
Nomenclature.....	xiii
Chapter 1: Introduction.....	1
Chapter 2: Literature Survey.....	2
Chapter 3:.....	3
Chapter 4:.....	4
Chapter 5:.....	5
Chapter 6:.....	7
Chapter 7:.....	8
References.....	9
Turnitin Plagiarism Report.....	10
Annexures.....	11
(a) Monthly Progress Reports (MPRs).....	11-13
(b) Self-evaluation of Project.....	114
(c) Stipend Proof.....	115



CHAPTER 1: INTRODUCTION

1.1 Overview of the Project

The SecureNest Smart Home Security System is designed to enhance residential security by integrating computer vision and motion detection technologies. Utilizing the YOLO (You Only Look Once) model for object detection and a PIR (Passive Infrared) sensor for motion detection, the system provides real-time surveillance and alerts. The backend is developed using Flask, and the frontend is built with React, ensuring a seamless and user-friendly experience.

1.2 Problem Statement

With the rise in home security concerns, traditional systems often fail to provide timely alerts and accurate detection. There is a need for an advanced automated system that offers real-time surveillance and prompt alerts to ensure the safety of residents and their properties.

1.3 Objectives of the Project

- **Real-Time Surveillance:** Provide continuous monitoring via live video feeds.
- **Accurate Object Detection:** Implement YOLO for precise human detection.
- **Motion Detection:** Utilize a PIR sensor to detect movement and trigger alerts.
- **User-Friendly Interface:** Develop an interactive web interface using React.
- **Seamless Integration:** Integrate YOLO, PIR sensor, and camera feed into one system.
- **Robust Alert System:** Send real-time alerts for detected motion or unauthorized entry.

1.4 Scope of the Project

- Development of a comprehensive security system integrating object detection and motion detection.
- Providing a live video feed with real-time alerts via a web interface.
- Ensuring the system is user-friendly, reliable, and capable of scaling with additional features like multi-camera support and advanced alert mechanisms.



ANNEXURE

SELF-EVALUATION OF PROJECT

Month	Start date – End date (DD/MM/YY) - (DD/MM/YY)	Progress of Project
Month- 1	01/08/24 – 31/08/24	<ul style="list-style-type: none"> - Defined project scope and requirements. - Started developing the backend and frontend structure. - Initial research on YOLO and PIR sensor integration.
Month- 2	01/09/24 – 30/09/24	<ul style="list-style-type: none"> - Implemented YOLO-based object detection. - Integrated PIR sensor with Arduino. - Developed API endpoints using Flask. - Enhanced the frontend interface.
Month- 3	01/10/24 – 31/10/24	<ul style="list-style-type: none"> - Refined the user interface. - Implemented real-time alert system. - Conducted extensive testing and debugging. - Started preparing project documentation.
Month- 4	01/11/24 – 19/11/24	<ul style="list-style-type: none"> - Completed final testing and bug fixes. - Finalized project documentation. - Conducted user testing and reviewed system performance. - Prepared and submitted the Turnitin plagiarism report. - Finalized project for submission.

[Signature]
9-11-24

Dr. Namita Arya
Assistant Professor