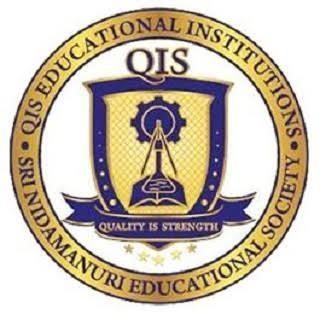
**QIS COLLEGE OF ENGINEERING & TECHNOLOGY**

**(Autonomous & NAAC ‘A+’ Grade)**

**(Approved by AICTE, New Delhi & Affiliated to JNTU Kakinada)**

**(An ISO 9001:2015 Certified Institution)**

### VENGAMUKKAPALEM, ONGOLE-523272, A.P., INDIA



**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

**SUBMITTED BY:**

|  |  |
| --- | --- |
| 22491A0568 | ATHANTI AMULYA |
| 22491A0570 | BADRI VENKATA THIRUMALA |
| 22491A0573 | BOGGU GRACY |
| 22491A0581 | EDUPULAPATI VENKATA JYOTHI SWAROOP |
| 22491A05A4 | MUDDANA SRI HARSHA |
| 22491A05C9 | BAPANAPALLI VENKATA PRASAD |

**TITLE :**

AI BASED SMART SECURITY SYSTEMM

**ABSTARCT:**

In recent years, advancements in artificial intelligence have revolutionized security systems, making them more intelligent and responsive. This project presents an AI-based smart security system designed to enhance security measures through the integration of motion detection, facial recognition, and voice recognition technologies. The system operates by continuously monitoring the environment using high-definition cameras and sensitive motion sensors. Upon detecting any movement, the system instantly activates its facial recognition and voice recognition modules to identify and authenticate individuals present in the monitored area.

The facial recognition component captures and analyzes facial features, matching them against a database of known individuals to verify identities. Simultaneously, the sentence recognition module processes audio inputs to recognize specific phrases or sentences spoken by individuals. This dual-layered authentication mechanism ensures high accuracy and significantly reduces the likelihood of false alarms.

The AI-based smart security system provides real-time alerts and allows remote access via a mobile application, enabling users to monitor and control the system from anywhere. By combining these advanced technologies, the system offers a robust and efficient solution for residential, commercial, and industrial security needs. This project demonstrates the practical application of AI in security systems, enhancing safety and peace of mind for users.

FACULTY NAME: Dr.D.Vidhyanandha Babu

FACULTY NAME:Dr.K.M.Rayudu

Keywords :

Machine learning, artificial intelligence, natural language processing, motion detection, face recognisation , sentence matching ,etc…

Introduction:

In today's world, security is of paramount importance, and the integration of advanced technologies has become essential to ensure robust protection. This project focuses on the development of an AI-based smart security system that leverages cutting-edge techniques such as motion detection, facial recognition, and sentence recognition to provide a comprehensive security solution. The system is designed to monitor an environment in real-time, detecting any movement through motion sensors. Upon detecting movement, it activates facial recognition to identify individuals and uses sentence recognition to analyse spoken words, ensuring that only authorized personnel gain access. This intelligent, multi-layered approach enhances security by providing accurate, reliable identification and alerting mechanisms, making it suitable for a wide range of applications, from residential to commercial and industrial settings …..

Literature survey:

Pavithra et al [1]. (2021): Proposed an IoT-based monitoring and control system for home automation, using sensors and actuators to control and monitor home appliances. Baig et al. (2): Reviewed AI, modeling, and simulation techniques for home automation, highlighting AI's potential in improving home security and automation. Tharaniya Soundhari et al. (3): Developed an intelligent interface-based speech recognition system for home automation using Android applications. Pooja et al. (4) Proposed a home automation system using IoT and machine learning algorithms, which can learn and adapt to user behavior to improve home security. Anitha et al. (5): Presented a cyber defense system using AI and machine learning techniques to detect and prevent cyber attacks on home security systems.