



G. Narayanamma Institute of Technology & Science (For Women) (Autonomous)

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Accredited by NBA & NAAC, an ISO 9001:2015 Certified Institution
Shaikpet, Hyderabad-500104

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING (DATA SCIENCE)

<GN-R-18> (2022 - 2023) II B.Tech II Sem Hobby Project

on

IOT BASED HOME SECURITY SYSTEM

Abstract

The project aims to design a framework for providing a house owner/member with the immediate notification of an ongoing theft or unauthorized access to their premises. For this purpose, a rigorous analysis of existing systems was undertaken to identify research gaps. The problems found with existing systems were that they can only identify the intruder after the theft, or cannot distinguish between human and non-human objects. The proposed approach can be applied to an IoT based smart home monitoring system in near real-time.

A smart home designed and developed on an integrated framework of sensors, cameras, and customized hardware to analyze unauthorized access. The system operates at two different levels: through a hardware interface and through a software interface. In today's society, threats ranging from; over-current destruction, suffocation arising from the accumulation of carbon monoxide, fire (which can result from leakage and accumulation of combustible gases), leakage of dangerous gases etc., are all rampant, these threats also need to be monitored. The 'modern and smart' security systems which do in fact cover other potential threats and do function smartly by incorporating other forms of alarms notably phone-based alarms for remote monitoring, costs a fortune to set up, operate and maintain, owing to the nature of software design, type of materials used in the system.

HARDWARE REQUIREMENTS:

1. Arduino UNO
2. GSM module SIM 900A
3. PIR Sensor
4. Fire Sensor
5. Buzzer
6. LEDs
7. Jumping wires

SOFTWARE REQUIREMENTS:

1. Arduino Software (IDE)

*Dept R&D: No



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