

**DETECTION OF AN INTRUDER AND TRACKING THE GROUND
MOTION BY USING IOT**

A PROJECT REPORT

Submitted by

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In partial fulfilment for the award of the degree

of

BACHELOR OF ENGINEERING

in

ELECTRONICS AND COMMUNICATION ENGINEERING



T.J.S. ENGINEERING COLLEGE, PERUVOYAL, CHENNAI



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BONAFIDE CERTIFICATE

Certified that this project report "DETECTION OF AN INTRUDER AND TRACKING OF GROUNDS MOTION BY USING IOT" is the bonafide work of the following students

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who carried out the project work under my supervision.

S. Velmurugan
22/06/22

SIGNATURE OF HOD

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EXTERNAL EXAMINER



ABSTRACT

etection of intruders and predicting their activities are the first and foremost needs of surveillance. An embedded system employing geophone, adaptive event extraction, and robust machine learning algorithms have made it possible not only to detect the presence of a potentially harmful intruder but also to predict to a high degree of accuracy, his state of motion, and to take counter action at the earliest. We can also sense the humidity level. Humidity sensors work by detecting changes that alter electrical currents or temperature in the air. Now a days there are so many natural disasters occurring by using this project we can also sense the earth quakes i.e we can sense the unconditional changes in the soil that are related earth quakes. We can monitor all changes from any where by using IOT module.



A handwritten signature in blue ink, appearing to be 'J. Anand', written over a light blue grid background.

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EC8551 COMMUNICATION NETWORKS

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OBJECTIVES: The student should be made to:

- Understand the division of network functionalities into layers.
- Be familiar with the components required to build different types of networks
- Be exposed to the required functionality at each layer
- Learn the flow control and congestion control algorithms

UNIT I FUNDAMENTALS & LINK LAYER

9

Overview of Data Communications- Networks – Building Network and its types– Overview of Internet - Protocol Layering - OSI Mode – Physical Layer – Overview of Data and Signals - introduction to Data Link Layer - Link layer Addressing- Error Detection and Correction 62

UNIT II MEDIA ACCESS & INTERNETWORKING

9

Overview of Data link Control and Media access control - Ethernet (802.3) - Wireless LANs – Available Protocols – Bluetooth – Bluetooth Low Energy – Wi-Fi – 6LowPAN–Zigbee - Network layer services – Packet Switching – IPV4 Address – Network layer protocols (IP, ICMP, Mobile IP)

UNIT III ROUTING

9

Routing - Unicast Routing – Algorithms – Protocols – Multicast Routing and its basics – Overview of Intradomain and interdomain protocols – Overview of IPv6 Addressing – Transition from IPv4 to IPv6

UNIT IV TRANSPORT LAYER

9

Introduction to Transport layer –Protocols- User Datagram Protocols (UDP) and Transmission Control Protocols (TCP) –Services – Features – TCP Connection – State Transition Diagram – Flow, Error and Congestion Control - Congestion avoidance (DEC bit, RED) – QoS – Application requirements

UNIT V APPLICATION LAYER

9

Application Layer Paradigms – Client Server Programming – World Wide Web and HTTP - DNS- - Electronic Mail (SMTP, POP3, IMAP, MIME) – Introduction to Peer-to-Peer Networks – Need for Cryptography and Network Security – Firewalls.

TOTAL:45 PERIODS

OUTCOMES: At the end of the course, the student should be able to:

- Identify the components required to build different types of networks
- Choose the required functionality at each layer for given application
- Identify solution for each functionality at each layer
- Trace the flow of information from one node to another node in the network



J. [Signature]

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