SPYPRO SECURITY SOLUTIONS Pvt. Ltd.,
C Y B E R S E C U R I T Y

5-Days Workshop on IoT INTEGRATED WITH AI

In today's rapidly evolving digital world, Internet of Things (IoT) combined with Artificial Intelligence (AI) is transforming industries such as healthcare, agriculture, smart cities, manufacturing, and energy systems. Intelligent IoT software solutions enable real-time data collection, analysis, prediction, and automation.This 5-Day Workshop on Software Solutions for IoT Integrated with AI is a comprehensive, hands-on training program designed to equip participants with practical skills to build, deploy, and manage smart IoT applications powered by AI.

Topics to be Covered in IoT Integrated with AI

Day 1: Introduction to IoT & AI
- Overview of Internet of Things (IoT)
- IoT architecture and components (Device, Gateway, Cloud, Application)
- Introduction to Artificial Intelligence & Machine Learning
- Why AI + IoT? (AIoT concept)
- Real-world applications of AIoT
- Overview of software tools and platforms used in IoT & AI
- Understanding IoT data and data flow

Day 2: IoT Software Development & Cloud Integration
- IoT communication protocols (HTTP, MQTT)
- REST APIs for IoT data transfer
- Cloud platforms for IoT (AWS / Azure / Firebase – overview)
- Data storage and real-time data streaming
- Introduction to dashboards and data visualization

Day 3: **AI & Machine Learning for IoT Data**
- **Understanding IoT datasets**
- **Data preprocessing and cleaning**
- **Feature extraction from sensor data**
- **Supervised & Unsupervised Machine Learning**
- **Predictive analytics for IoT systems**

Day 4: **Intelligent IoT Applications & Automation**
- **Anomaly detection in IoT systems**
- **AI-based decision making**
- **Real-time monitoring & alerts**
- **Edge AI vs Cloud AI**
- **Rule-based vs AI-based automation**

Day 5: **End-to-End AIoT Project & Deployment**
- **Designing complete AIoT architecture**
- **API integration and system communication**
- **Security basics for IoT software systems**
- **Deployment strategies for IoT & AI solutions**
- **Career opportunities in AIoT**

Duration: **The duration of this workshop will be five consecutive days, with 6 hours per day, totaling 30 hours, properly divided into theory and hands-on practical sessions.**

Certification Policy:

- **Certificate of Merit for all the workshop participants from SmartBridge.**
- **At the end of this workshop, a small competition will be organized among the participating students and winners will be awarded with a 'Certificate of Excellence'.**
- **Certificate of Coordination for the coordinators of the campus workshops**
- **Internship and placement also provide for selected student..**

Eligibility: It's a basic level workshop so there are no prerequisites. Anyone interested, can join this workshop.

Pre-Requisites:

- **Seminar hall/classroom having sitting capacity of 200 students for conducting hands on session for all the participants.**
- **Good Quality public address system ideally one/two cordless mikes will be required.**
- **Projector/ Screen along with black/white board for teaching and presentation purposes.**
- **One small stereo jack cord to connect in laptop for its sound system.**
- **Laptop/Computer per two students is necessary.**

Cyber Security | Ethical Hacking | Cyber Forensics | Projects & Training

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