AN ISO 9001:2015 CERTIFIED COMPANY

ROBOTRONIX®

The Creativity of your Mind

ROBOTRONIX ENGINEERING TECH PVT. LTD.

Embedded System & IoT



Internet of Things

Internship/ Industrial Training Program 2019

Introduction - Internet of Things

The Internet of Things (IOT) describes a worldwide network of intercommunicating devices. At this point (IOT) must be seen as a vision where "things", especially everyday objects, such as nearly all home appliances but also furniture, clothes, vehicles, roads and smart materials, and more, are readable, recognizable, locatable, addressable and/or controllable via the Internet. This will provide many new applications, such as energy monitoring, transport safety systems or building security. This vision will surely change with time, especially as synergies between Identification Technologies, Wireless Sensor Networks, Intelligent Devices and Nanotechnology will enable a number of advanced applications.

IoT is the ability for things that contain embedded technologies to sense, communicate, interact, and collaborate with other things, thus creating a network of physical objects.

Opportunities and applications in IOT:

- Our country is moving towards the 'Smart City'. We want to contribute in the "Make in India" campaign of our Prime Minister Shri Narendra Modiji.
- The concepts behind Smart Homes, Smart watches, Smart cities etc are nothing but IoT (Internet of Things) Which can be controlled or monitored via any remote location through mobile or web.
- Government of India has allocated 7,060 crore for 100 new smart cities in Budget 201516.
- Million Jobs to be generated for IOT's trained professionals in top companies by 2017 (27 billion objects will be connected 2017).
- 90 % of Top electronics products companies like (Intel, Qualcomm, apple, IBM, Microsoft, Samsung, and L.G.and Amazon) are going to be smart.

Applications:

There are several applications of networked Things in Agriculture, Healthcare, Retail, Transport, Environment, Supply chain management, Infrastructure monitoring etc. Some of them are listed below:

Agriculture: Applications in Agriculture include Soil and plant monitoring, Monitoring of food supply chain, Monitoring of animals

Retail Management: Retailing has many applications areas of business interest. It includes monitoring customer behavior and preferences, Shelf stock tracking, context based advertising and product promotions, vending machines, automated checkout, and theft control.

Healthcare: Identification of spurious drugs is a major application in healthcare area. Other application areas are personal health monitoring, telemedicine, assisted living.

Security: Detection of counterfeit goods, Access control, restricted materials, Banknotes, Passports.

Government and public sector: Disaster management, Forest monitoring, Tourism support, Homeland security, Pollution monitoring.

Home: Home security, Smart - home (lighting, entertainment, energy management, assistance) Sports: Sports equipment: user performance monitoring, Safety.



Upload data on Server & Monitor graphically:

- Network &connectivity, Protocols
- Power consumptions & complexity
- Data Security, Interoperability, Upgrades & maintenance

What are Benefits of Participants?

- Embedded Systems Hardware & Software Development Platform for IOT.
- All network protocols for IOT (to connect devices).
- Practical for all above mention topics and create your own IOT Devices.
- Understand the concept behind smart cities, smart wearable's &smart switches.
- Hands on experience in building, circuit designing as well as programming.

Course Contain with Project Work (Embedded System & Internet of Things)

- Introduction to Embedded System
- Embedded System in IoT (Microcontroller's 8051, Arduino, Node MCU)
- Microcontroller Vs Microprocessor
- Higher Level & Lower-Level Programming Language
- Embedded C & Assembly Language Programming
- Basics of C Language
- Hands on work with Microcontroller
- Arduino Interfacing: LED
- Analog to digital
- Ultrasonic sensor interfacing
- IR Sensor Interfacing
- **Line Follower Robot**
- PIR Sensor Interfacing
- Bluetooth Interfacing
- Soil moisture sensor Interfacing
- **Project: Smart Irrigation System**
- Motor driver interfacing (L2983D)
- Servo Motor Interfacing
- **Obstacle Avoider Robot**
- Radar Project with Ultrasonic
- Relay Interfacing
- LM32(Temperature Sensor Interfacing)
- Programming in Embedded C (interfacing like LCD, Keypad etc)
- **Project Work: Electronic Voting Machine**
- **Project Work: Keypad Based Door Lock System**
- Serial Communication with wired & wireless devices
- Interfacing with RFID
- **Project Work: RFID Based Attendance System**
- HTML, CSS
- Esp 8266(Node MCU - Wi Fi) as a server & Interfacing with web page
- Data from server to controller & controller to server
- GSM & GPS Interfacing
- **Project Work: IoT based Home Automation**

Fee Structure: - (Including Certification & Service tax)

15000/- for a single student.

Training kits are distributed between three students and return back after the Training.

For any further clarifications please feel free to contact us,

Warm Regards,

Thanking You

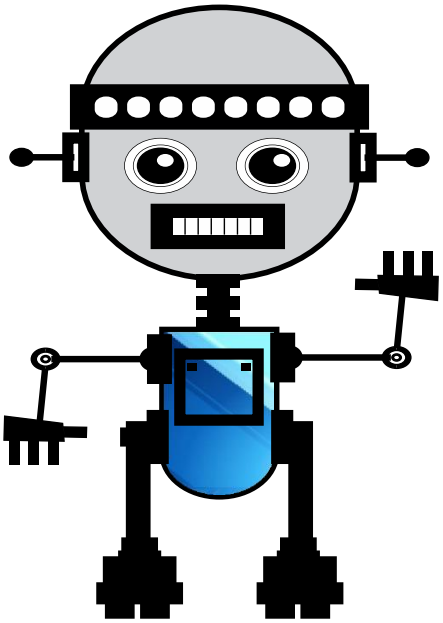
HR Department

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Our Associates

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Indian Institute of Technology, Roorkee
Maulana Azad National Institute of Technology, Bhopal
Shri Govindram Seksaria Institute of Technology and Science
Institute of Engineering & Technology, DAVV Indore
Engineering College Tuwa, Godhra (Gujarat)
Bhopal School of Social Science, Bhopal
Jai Narain College of Technology, Bhopal
Lakshmi Narain College of Technology, Indore
Swami Vivekanand College of Engineering, Indore
Rishiraj Institute of Technology, Indore
Sanghvi Innovative Academy, Indore
Star Academy of Technology & Management, Indore
Mathura Devi Institute of Technology & Management, Indore
Jagadguru Dattatray College of Technology, Indore
BM College of Technology, Indore
Chameli Devi Group of Institution, Indore
Vikrant Institute of Technology & Management, Indore
Malwa Institute of Science & Technology, Indore
Alpine Institute of Technology, Indore
Lakshmi Narain College of Technology, Jabalpur
Saraswati Institute of Engineering & Technology, Jabalpur
St. Aloysius Institute of Technology, Indore
Sardar Patel College of Technology, Balaghat
Geetanjali Institute of Technical Studies, Udaipur (Raj.)
Aravali Institute of Technical Studies, Udaipur (Raj.)
Gyan Sagar College of Engineering, Sagar (M.P.)
Takshshila Institute of Engineering & Technology, Jabalpur
Prestige Institute of Engineering Management & Technology, Indore
Dronacharya College of Engineering, Delhi-NCR
Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore
Medi-Caps University, Indore
Lingaya's Vidyapeeth, Faridabad
Ansal University, Gurgaon
Aravali College of Engineering & Management, Faridabad & many more...



About Us

ROBOTRONiX is a "Centre for Innovation in Technology" **ROBOTRONiX Engineering Tech Pvt. Ltd.** ours is an organization driven by excellence in technology our domain concerns all the fields of engineering i.e. C.S., I.T., E.C.,E.X., E.E. & E.I. is a venture of the engineers for the engineers by the engineers we work on hands on technology for robot synthesis instead of simply assembling the same ,we are a trusted name amongst the student community and students have rested their faith on us from the last three years and we believe not on long term relationships but life time relationship we here at **ROBOTRONiX** are one well-knit family and believe in extending support to the students through their technical voyage.

Our Services

· Scintillating Workshops
. Product Development
· Life Transforming Seminar
· Industrial Training
· Project Guidance
· Enlightening Guest Lectures

WHY CHOOSE "ROBOTRONiX"?

- ✓ Extensive and well-planned course structure from an industry point of view.
- ✓ Group Discussions.
- ✓ Mock Tests.
- ✓ Project Report Development Assistance.
- ✓ Documentation.
- ✓ DVD's containing all required Software, e-Books, Circuit Diagrams etc.
- ✓ Any work done is hosted and tested by student only.
- ✓ Training Certificate.

An ISO 9001 : 2015 Certified Company
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