TechieNest

Transforming Engineers to Technocrats

ROBOTICS

Workshop
Presented On

Arduino

in collaboration with

IIoT™
INDIAN INSTITUTE OF IOT

2017-2018

TechieNest
Transforming Engineers to Technocrats

Celebrating the alliance

with the most prestigious institutes of our country

TechieNest
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TechieNest *takes proud on its Success everyday...*

Certified by the **Standards of ISO** and **leading Institutes** of the Nation we have proven to be a symbol of faith and dignity for our students.

Our QUALITY NETWORKs

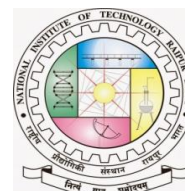| IIT Bombay	IIT Kanpur	IIT Roorkee	IIT Mandi	IIT Jodhpur	IIT Indore

IIT Hyderabad	MANIT Bhopal	MNIT Jaipur	NIT Raipur	NIT Srinagar

NIT Jalandhar	IIIT Kalyani

OUR FORTE

Internet of Things (IoT)

Machine Learning

Data Science

Artificial Intelligence

Embedded Systems

Robotics

Ethical Hacking

PYTHON

DAY 1
(Session 1 & 2)/6-8 Hours

Introductory & Theoretical session

- Introduction to Arduino.
- Future aspects.
- Wide description about Microcontrollers.
- Wide description about Arduino
- Memory organization in Arduino.
- Input & Output peripherals in Arduino.
- Resisters in Arduino.
- Programming of arduino.

Kits Distribution

Practical session
- Interfacings of peripherals.
- Output devices interfacings.
- Programming for LED interfacings with Microcontrollers.
- Different patterns of LED blinking.

Motor Interfacing

- Actuators to be used in Robots.
- Wide description about L293D.
- Interfacing motor driver IC with Microcontroller.
- Interfacing of Motors with microcontrollers via L293D.
- Differential drive mechanism of Robot.

Project: Development of an Autonomous Robot.

Introduction to IR sensor

- Interfacing of IR sensor through Arduino.
- Introduction and working of LM358 comparator IC.

Project: Development of obstacle avoider robot.

Project: Development of obstacle follower robot.

Project: Development of never falling bot.

Concept of line follower.
Project: Development of line follower robot.

Serial communication & Bluetooth Technology

- Accessing internal USART of Arduino.
- Interfacing Bluetooth module with Arduino.
- Transmitting & receiving data wirelessly through Bluetooth of Laptop/Android mobile phone.

Project: Bluetooth Controlled Robot via laptop.

Project: Bluetooth Controlled robot via Android mobile.

Concept of basic networking

- Accessing camera in private network.

Project: Spy Bot.

Query Session & Comptetion

- ATmega8/Arduino Development Board,
- D type programming cable.
- On board voltage regulated Power supply unit.
- IR Sensor pair.
- Bluetooth module.
- Universal Robotics Platform.
- DC Motors pair.
- Wheels.
- Screws.
- Screw driver.
- Supporting cables.
- Adaptor

Workshop Toolkit
(Provided in a group of 5 students)

- ✓ A seminar hall/Class room with seating capacity of 100 students
- ✓ One projector.
- ✓ 2 Collar mike with sound system.
- ✓ White board and marker.
- ✓ Workshop coordinators(3-5)
- ✓ Laptop charging points.
- ✓ One laptop/PC to each group.

Workshop Arrangements
By college coordinator

Take Aways

Certificate of Participation

Certificate of Coordination

Certificate of Appreciation to College

Memento to College from TechieNest

Relevant Software.

Study Material (Soft Copy) FREE.

✓ Acquaint yourself with practical knowledge.
✓ Workshop taken by Exceptionally Qualified and Professional Trainers actively involved in Research & Development.
✓ Learn your Area of Interest directly from Industry Experts.
✓ Scales up your CV/ Resume in Technical while boosting your Logical Abilities.
✓ Brings Confidence in you for Technical rounds of Interview.
✓ Lifetime assistance on any of your projects.

Associated Benefits
of our workshops

TechieNest
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TechieNest in Motion (PAN India)

PEC Chandigarh

IPEC Ghaziabad

AMU Aligarh

Modern College of Engg, Pune

MIT Pune

BMS Bangalore

Mody Laxmangarh

Manipal University, Jaipur

Amity University, Jaipur

Banasthali University

JECRC Foundation & JECRC University, Jaipur

BITS Mesra, Jaipur

AIET Jaipur

Vignan Hyderabad

GITAM Hyderabad

SGSIT Indore

KIIT Bhubaneswar

KITS Warangal

Thejus Thrissur, Kerala

Santosh Rungta Bhilai, Raipur

GEC Barton Hills, Thiruvananthapuram