The IoT Academy
Connecting The Unconnected

2021

6 Months

IoT Training Brochure

Connecting The Unconnected

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ABOUT US

We are a fast emerging company imparting quality and affordable programs for colleges and individuals for digital economy skills training, internship and guidance focused on helping people develop the skills they need to thrive in the rapidly growing digital economy.

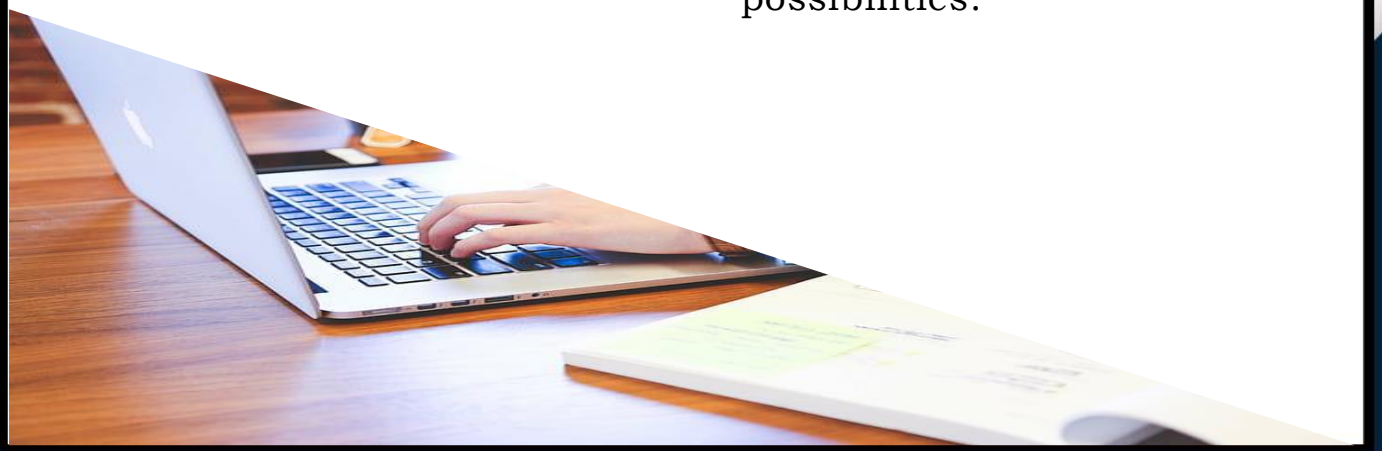
'The IoT Academy' has made a niche name for itself providing rigorous online training in Internet of Things (IOT), embedded systems, Big Data, Data analytics, Industrial IoT, Industry 4.0, Python, Artificial Intelligence, Digital marketing and Machine Learning. Based in Delhi NCR since 2017 we have helped 150+ professionals, 600+ students and 100+ faculties across the states get trained, acquire certifications, and upskill their employees.

MISSION

We aspire to provide learners an edge over the career they choose to stand out amongst today's competitive world through support in training and various academic and industrial collaborations.

VISION

At IoT Academy We believe that the future is about Unified and Converged technologies as reflected in our mission statement. Every aspect of life will eventually lead in bringing forth a unified world of immense possibilities.



Our Services

For Educational Insitutes

Lab Setup

We provide hardware and support in lab setup for IoT and LPWAN.

Workshop/Seminars

We conduct workshop and seminars on emerging technologies which are given by industry experts.

Center of Excellence

Under our 'Center of Excellence' offering we provide all the services apart from encouraging R&D and entrepreneurship efforts by guiding both faculty and students.

Faculty Training

We provide training to faculties of educational institutes under our 'Faculty Development Program' so that they become aware of how new technology is used in industry and they can impart the same knowledge to their students

Student Training

We provide training to students on various topics including the emerging technologies which are targeted towards making them more relevant and employable as per the industry.

Our Services

For Students

Internships

We provide interships to students where they are able to work in a professional environment and learn a lot.

Projects

We help students design and implement projects whether a small one or a big one on any topic within the scope of all the subjects that we provide training for.

Placements

Our complete training programs comes with 100% placement guarantee as the courses are designed specifically keeping enhancing skills for jobs in mind.

Summer/Winter Training

Short duration trainings during summer and winter breaks are designed keeping school & college students in mind. Our aim is to give in-depth knowledge to students on a particular topic of their choice within the time frame.

Training

We provide training to students on various topics including the emerging technologies which are targeted towards making them more relevant and employable as per the industry.

Educational Partners

E&ICT, IIT Kanpur

E&ICT, IIT Guwahati

E&ICT, IIT Roorkee

NIT Patna

ASTU University

J.S.S. Noida

IPEC

BVM Engineering College

BVP Pune

Jamia Hamdard

ITS Ghaziabad

VSSUT Odisha

JIIT Noida

JNTU Hyderabad

VIGNAN'S

Corporate Partners

Our Placements

Congratulations!

To our students who have worked so hard to be placed within the Top Companies.

Prakhar Maheshwari
Capgemini

Saumya Singh
Bosch

Anjuli Agarwal
TCS

Yogesh Mishra
UniConverge Technologies

Tanu Chinwan
Capgemini

Raghav Aggarwal
Aerogram

Vaishali Singh
eWandzDigital Services

Ayush
TCS

Course Curriculum

01 Introduction to IoT

- IoT and Its Application
- How M2M is different from IoT
- Components of IoT
- IoT Devices
- IoT Communication Protocols
- IoT and Its Future

02 Embedded C

- Keywords and Data type
- Operators
- Flow control
- Loops & Functions
- Arrays & Pointers
- Structure and union

Module-1 IoT Using Arduino & NODEMCU

03 Getting Started With Arduino

- Introduction to Microcontroller
- Introduction to Arduino
- What is ARDUINO?
- What is open source Microcontroller platform?
- Pin configuration
- Fundamentals of C programming
- Introduction to Arduino IDE

04 Controlling Gpio Pins

- Input Output programming
- LED Pattern
- Reading input from Button and Sensors Interfacing LCD and Motors

05 Serial Communication

- Introduction to USART
- Introduction to Serial Monitor
- Controlling Home Appliances from computer
- Introduction to Bluetooth

06 Analog To Digital Converter

- Introduction to ADC
- Voltage Meter
- Introduction to Temp Sensor (LM35)
- Interfacing LM35 with Arduino
- Interfacing Accelerometer

07 Pulse Width Modulation

- Introduction to PWM
- Controlling Intensity of Light
- Controlling Speed of Motor
- Introduction to Servo Motor

08 Wi-Fi Module

- Introduction to ESP8266
- How to use ESP8266
- Pin Configuration
- Commands of ESP8266
- Connecting to the LAN and WAN

09 Hands-On Interrupt

- Introduction to interrupt
- Programming
- Applications

10 Introduction To IoT Platforms

- Introduction to IoT platform
- Usage of IoT platform
- How to use different IoT platforms

11 Getting Started With NODEMCU

- Introduction to NODEMCU
- How to use NODEMCU
- Pin configuration
- Software Setup
- GPIO
- Serial communication
- ADC
- PWM
- Connecting to LAN
- Connecting to WAN

12 Hands-On "Things" (Devices)

- Embedded Systems
- Input Output devices
- Analog & Digital Sensors
- Actuators
- Motors, IR Sensors
- Temperature Sensor
- LDR, Relay
- Water level indicator
- LCD, 7-segment

13 Web Services And IoT Clients

- Introduction to Cloud platforms for IoT
- ThingsSpeak & ThingHTTP
- Blynk platform
- Send data on internet

14 Real-Time Projects

Module-2 AVR Microcontroller

15 Introduction To AVR Microcontroller

- LED
- LCD
- Graphical LCD
- 7-segment
- Switch
- Matrix Keypad
- Relay and Buzzer
- DC Motor
- Servo Motor
- Bluetooth
- DHT11

16 Peripheral Programming

- Timers
- Timer Input Capture Mode
- External Hardware Interrupts
- RTC
- ADC
- PWM
- EEPROM
- Analog Comparator
- Watchdog Timer

17 Communication Protocols

- UART/USART (RS232)
- SPI
- I2C

18 Devices And Sensor Interfacing

- GSM
- GPS
- RFID (EM18)
- Temperature/Humidity Sensor
- Gas Sensor
- Proximity Sensor
- IR Sensor
- Ultrasonic Sensor
- PIR Sensor
- TSOP
- OLED
- LDR
- Graphical LCD

Module-3 ARM Microcontroller

19 Introduction To Processing Devices

- Introduction to Microcontrollers
- Introduction to Microprocessor
- Other programmable devices
- Difference between various processing devices

20 Basics Of Computer Architecture

- RISC vs. CISC Architecture
- RISC vs. ARM 32 bit

21 ARM Architecture

- Introduction to ARM Architecture
- Block Diagram
- Harvard and Von-Neumann Architecture
- Functional Diagram

22 Registration And Memory Of ARM7TDMI

- Various types of memory
- ARM Register Set
- 32 bit CPU registers
- CPSR and SPSR register
- ARM pipeline

23 ARM Instruction Sets

- Introduction to 32 bit ARM Instruction set
- Introduction to 16 bit THUMB Instruction set
- Introduction to 8 bit Jazelle Instruction set
- Keypad interfacing
- LCD interfacing
- Motor interfacing

24 Timers

- Timer 0 and Timer 1 Feathers
- Pin Description
- Register Description
- Basics of Timer Handling

25 Serial Port

- Basics of serial port (RS232)
- Types of connectors
- Interfacing pc with micro controller
- MAX 232 interface Hardware structure
- Serial port configuration (mode selection)
- UART0 and UART1 handling

26 Interrupt Controller

- Basics of interrupt
- Polling method
- Difference between polling and interrupt method
- Interrupt service routine (ISR)
- Vector Interrupt

27 FIQ

28 IRQ

29 ADC

- Theory of ADC
- Types
- Inbuilt ADC
- Interfacing external device to ADC

30 Pulse With Modulation

- PWM Generator
- Register Description
- RTC Interrupts

31 Real Time Clock

- Feathers
- Resister Description
- RTC Interrupts

32 Working With Flash Memory System And Programming

- Flash Memory System
- Flash Boot Loader and Feathers
- Workings
- Introduction to JTAG

Flexible Batches at The IoT Academy

Online Training

Duration	Weekday batch	Weekend Batch
6 Months	MON - THUS	SAT & SUN

Classroom Training

Duration	Weekday batch	Weekend Batch
6 Months	MON - THUS	SAT & SUN

Thank You!

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