



SUMMER TRAINING PROGRAM

IoT & EMBEDDED SYSTEMS

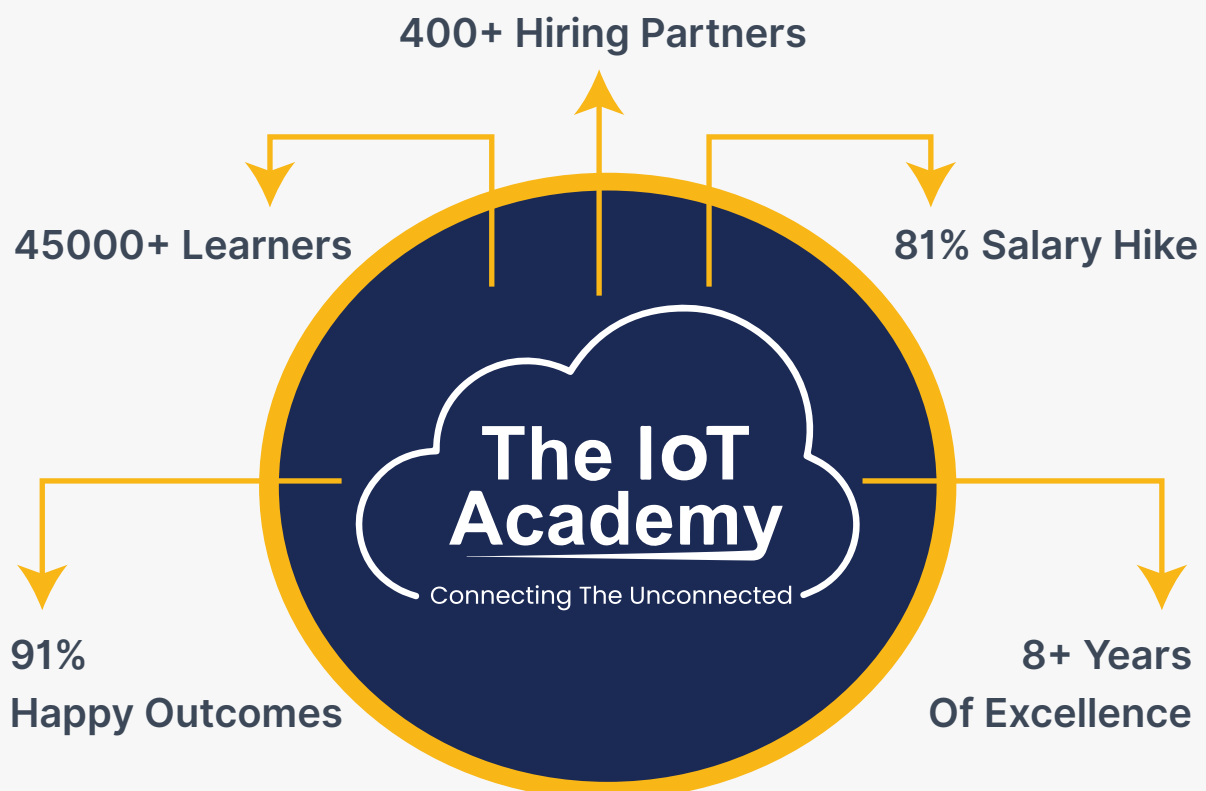
4 Weeks

About The IoT Academy

The IoT Academy, established in 2017 is a fast emerging company imparting quality programs for skills training, internship and guidance in cutting edge technologies like **Data Science, Machine Learning, Artificial Intelligence, Internet of Things, Embedded Systems & many more** and focused on helping people develop the skills they need to thrive in the rapidly growing digital economy.

The IoT Academy has collaborated with various premier institutes e.g. **EICT Academy, IIT-Guwahati, IIT-Roorkee and IIT-Kanpur** for **Advance Certification courses** to take provide outcome-centric solutions to help them achieve their professional goals.

“Empowering learners to discover, innovate, and create brighter futures through transformative education.”



Our Services

We provide these services in collaboration with our parent company UniConverge Technologies

SETUP of IOT & Industry 4.0 LABS

The IOT & Industry 4.0 Academy offers a self-sustainable model to learn the Internet of Things through IOT & Industry 4.0 Labs setup and supported by us.

FACULTY DEVELOPMENT PROGRAM (FDP)

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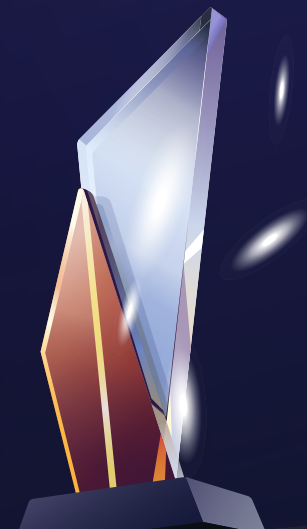
CENTER OF EXCELLENCE (IOT & Industry 4.0 / ML-AI/ Cloud Computing (AWS)/ Industry4.0/ 5G)

We help the educational institutes in developing and supporting the Innovation and Incubation centers that adhere to the best of the practices.

Our Achievements

We work closely with industry and try to understand the implementation aspects of technologies and its usage(s); this allows staying in-sync with cutting age technologies. Our Salient achievements in past years.

- **20000+** Students Internship in 2023-2025
- **1400+** Faculty Training
- **65000+** Learners Training
- **50+** IoT/CPS Labs supply
- **17 Center for Excellence/ Innovation Labs (AI, IoT, 5G) MoUs** with **EICT Academy IIT Kanpur, IIT Roorkee, IIT Guwahati** for running certification program for Students & Faculties
- **35+ MoUs** for upskilling with various institutes
- Online self-paced learning/Internship platform for student and working.



Why Choose Our Short-Term Courses?

Industry-Relevant Curriculum

Get hands-on with tools, techniques, and frameworks used by professionals in the industry.

Project-Based Learning

Apply what you learn through real-world projects and case studies.

Flexible Learning

Access recorded sessions, live classes, and doubt-clearing sessions as per your schedule.

Certificate of Completion

Earn a recognized certificate that adds credibility to your resume or LinkedIn profile.

Internship Opportunity

Top performers will get one month internship with us.

Career Services

Gain access to resume building sessions & mock interview preparations.

Our Academic Partners



E&ICT Academy
IIT Guwahati



E&ICT Academy
IIT Roorkee



E&ICT Academy
IIT Kanpur



IIT Jodhpur



E&ICT Academy
NIT Patna



RFRF
Foundation



ASTU
Guwahati



IIT Bhilai



Himachal Pradesh
University



ABES
Engineering
College

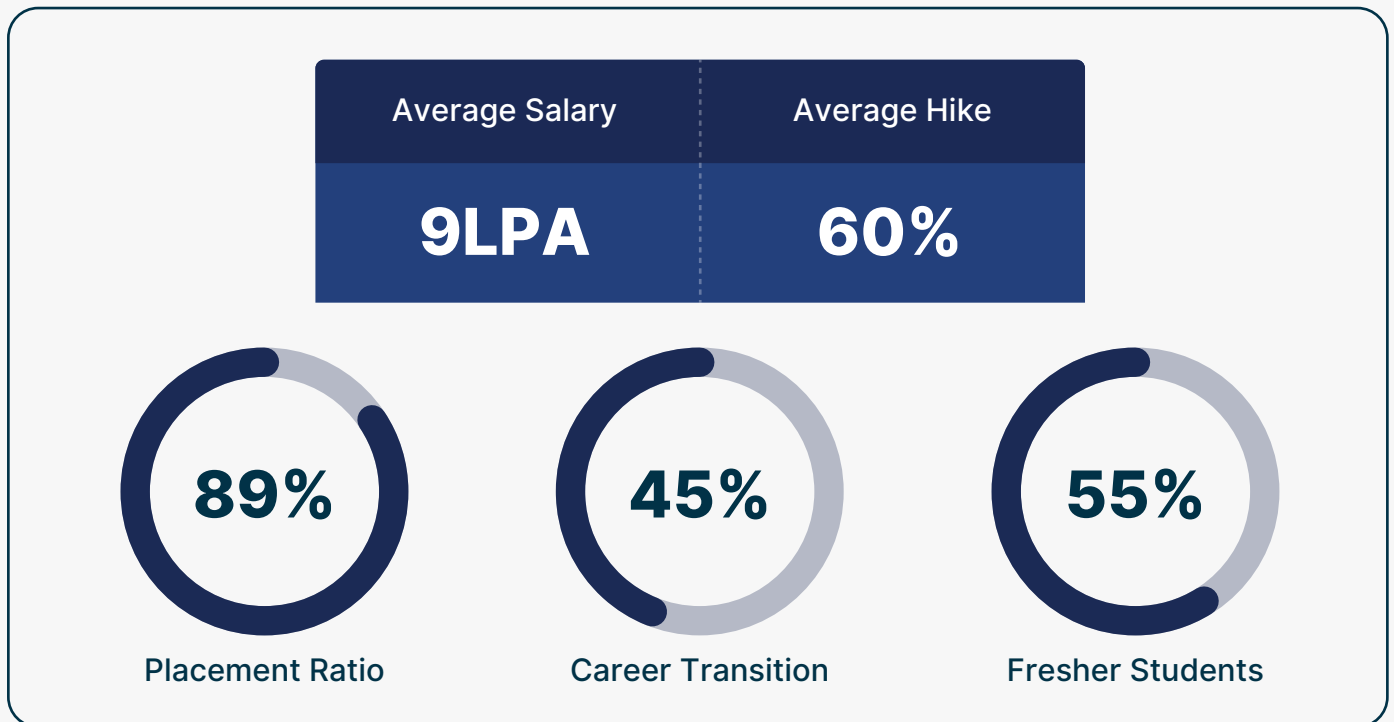


MSIT
College



IPEC
College

Placement Statistics



Corporates Who Hired form Us



400+ Partner Companies

Track The Curriculum

Week 1

Week 2

Week 3

Week 4

- Overview of IoT: Evolution and technologies used in IoT
- IoT Architecture: IoT embedded system, sensors and components
- IoT applications in different domains
- Introduction to IoT hardware Platforms
- Industry 4.0 IoT implementation
- Relation between PLC SCADA and IoT Embedded system
- Setting up circuit simulator
- Working of electronics circuit
- Introduction of NodeMCU controller and Arduino platform
- Interfacing RGB led with Arduino
- Traffic line controller
- Concept of multiplexing of keys/ sensors
- Concept of matrix arrangements of sensors/switches

Week 1

Week 2

Week 3

Week 4

- Concept of Digital / Analog Sensors Interfacing
- ADC theory for analog sensors and its implementation
- How to send multiple adc sensors data between two NodeMCU
- Communication protocols (SPI, I2C, UART)
- Communication between controllers by using SPI protocol
- SPI enable sensors interfacing
- Communication between controllers by using I2C protocol
- I2C addressable sensors interfacing and communication
- Introduction to IOT development board
- Introduction to IOT sensors and actuators
- Communication protocol UART receive and transmit by API
- Display value of LM35 on UART terminal
- Weather station using OLED display
- Air quality monitoring sensor interfacing with OLED Screen

Track The Curriculum

Week 1 Week 2 **Week 3** Week 4

- Concept of WiFi protocol and IP address with NodeMCU Platform
- How to get IP address of our router and NodeMCU device
- IoT Networking
 1. LPWAN/ LORAWAN
 2. NB-IOT
 3. LTE-M
 4. OSI/TCP Model
 5. HTTP/ HTML
 6. IoT Protocol- MQTT, CoAP, HTTP, URL
 7. IoT Cloud Platform – Thingspeak server, Blynk IoT, Adafruit IO, AWS IoT, Google firebase for IoT sensors
- Appliances control by using IP address and http request- GET/POST
- Actuators control by using NodeMCU as a access point
- Interfacing ultrasonic sensor for intrusion detection/distance measurement
- How to control our LED/ Actuators by creating web page button with
- HTML/CSS

Week 1 Week 2 Week 3 **Week 4**

- Sending Live sensor data to IBM Bluemix or AWS ADC theory for analog sensors and its implementation
- IoT based Temperature and humidity Monitoring over Thingspeak
- IoT and Communication Technologies (LPWAN/5G)
- Client and Server communication over IoT by using CoAP protocol
- MQTT mosquito integration with sensors
- IoT security
- Getting started with Node-RED
- Node-RED installation
- Flow design and deploying in Node-red
- IOT Dashboard in Node-red platform
- CoAP server and client model for control Led
- Local Server (Hive-MQ/ Mosquitto) integration with Node-RED
- Google firebase integration with sensors
- IoT application: Smart Home, Healthcare, Energy Monitoring, Smart Farming

What Our Learners Say About Us

Abhinav



An exceptional hands-on experience! The Applied Data Science course by The IoT Academy in collaboration with IITG provided me with good project exposure that truly prepared me for the industry. With expert guidance and a collaborative community.

Raghvendra Tiwari



The digital marketing course really impressed me! It taught me about search engine optimization (SEO), social media strategies, and how to analyze data giving me the tools I need to help any brand succeed online. This course is perfect for marketers at any level!

Deep Acharjee



I completed a 45-day industrial internship with IoT Academy in an online format. The entire team at the academy was exceptional. Additionally, the sales team provided all the necessary information and support to ensure the smooth operation of my internship throughout its duration. Sir Devesh, an outstanding faculty member, offered in-depth technical insights into embedded systems and IoT, addressing all of my queries. I am deeply grateful to the entire IoT Academy team for their assistance and guidance.

Ajitesh Rana



I recently had the pleasure of enrolling in IoT and Python courses at The IoT Academy, and I am genuinely impressed with the quality and depth of the content offered. From start to finish, the experience was nothing short of exceptional. The IoT Academy's IoT and Python courses exceeded my expectations on all fronts. If you're looking to gain a solid understanding of IoT concepts and harness the power of Python in IoT applications, I wholeheartedly recommend enrolling in their courses.

Vitoka H Sema



It's a very informative and practical place to learn. The I highly recommend others looking for a course in IoT and Embedded system and even other courses the faculties are very friendly and fun loving and their way of teaching is very practical. I learned a lot of new things.

Ankit Kumar



A wonderful learning experience with the IoT Academy, everything is good from curriculum to trainers so supportive.

What Our Learners Say About Us

Sana Tasneem



The IoT Academy provided a wonderful learning platform and experience for the students, taught by an amazing faculty. Every topic was covered thoroughly and made easy for students to understand.

RAVI KASAUDHAN



It's the best platform of learning The IoT Academy, You can easily learn online Internet of things Follow their official site & also you can follow on Instagram and LinkedIn

Mayank Bhandari



I think the experience with IoT Academy was amazing. I was provided with current problem of COVID-19 and was asked to visualize and predict the scenario, which i really loved to work upon, and meantime learned a lot during doing that. I even got certificate after successful completion of work. So at the end, i will just say i enjoyed it.

Anmol Pruthi



I was not sure about doing the Java course but when I joined the IoT Academy, I saw a great change in myself. I was getting more eager to learn everything from the trainer. The best atmosphere I have seen of learning is at The IoT Academy. If you want to get best out of you Join the IoT Academy.

Goldie Behl

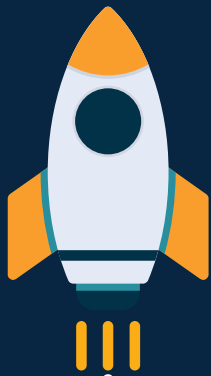


I had a great time doing this course and everyone involved in The IoT Academy has made it a great experience. I have been recommending you to everyone I know. Thank you for all the assistance and feedback, it has been delightful and very gratifying.

Harshita Mahanta



The training was really awesome, it helped me to gain new knowledge not only about IoT but also about the importance of programming. The experts, guides, mentors all were very supportive and provided much valuable advices. The contents that were provided included all the necessary things and really helped me to learn something new.



The IoT Academy
*is the hub for certifications across diverse career
growth oriented programs*

**“You Dream It,
We Make It Happen”**



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