The IoT Academy
Connecting The Unconnected

IOT & ENBEDDED SYSTEMS

Certification Course

READY TO TRANSFORM YOUR CAREER?

6 Months

5 Months Training
+
1 Month Internship

In Collaboration With

futureskills prime
A MeitY - nasscom Digital Skilling Initiative

nasscom

ISO 27001 CERTIFIED

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. **E&ICT 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.

400+
Hiring Partners

45000+
Learners

8+ Years
Of excellence

81%
Salary Hike

91%
Happy Outcomes

Quality education and career opportunities shouldn't come at a high cost. While many ed-tech companies prioritize profits, **The IoT Academy** is committed to transforming students' lives. We make premium professional education accessible to the masses at just 10% of the market cost.

AWARDS & RECOGNITIONS

AWARDS & RECOGNITIONS

Our

ADVANCED LEARNING LABS

Where Innovation Meets Hands-On Learning

Step into our modern lab facilities designed to turn your ideas into reality. Our well-equipped labs provide everything you need to master IoT and embedded systems through practical, hands-on experience.

What Makes Our Labs Special

Our labs bridge the gap between theory and practice. Every student gets access to industry-standard equipment and personalized guidance to build real-world projects with confidence.

Learn by Doing

Our "hands-on first" approach means you'll build, test, and troubleshoot real devices from day one. Work on your own projects beyond class hours with 24/7 lab access and peer collaboration.




FACULTY DEVELOPMENT PROGRAMS (FDPS)

- Conducted multiple intensive workshops for college faculty on AI-driven signal processing techniques.
- Delivered hands-on training using Edge Impulse, Python, and Hugging Face to build and deploy real-world AI models.
- Empowered educators to seamlessly integrate advanced AI/ML algorithms into their teaching and research.

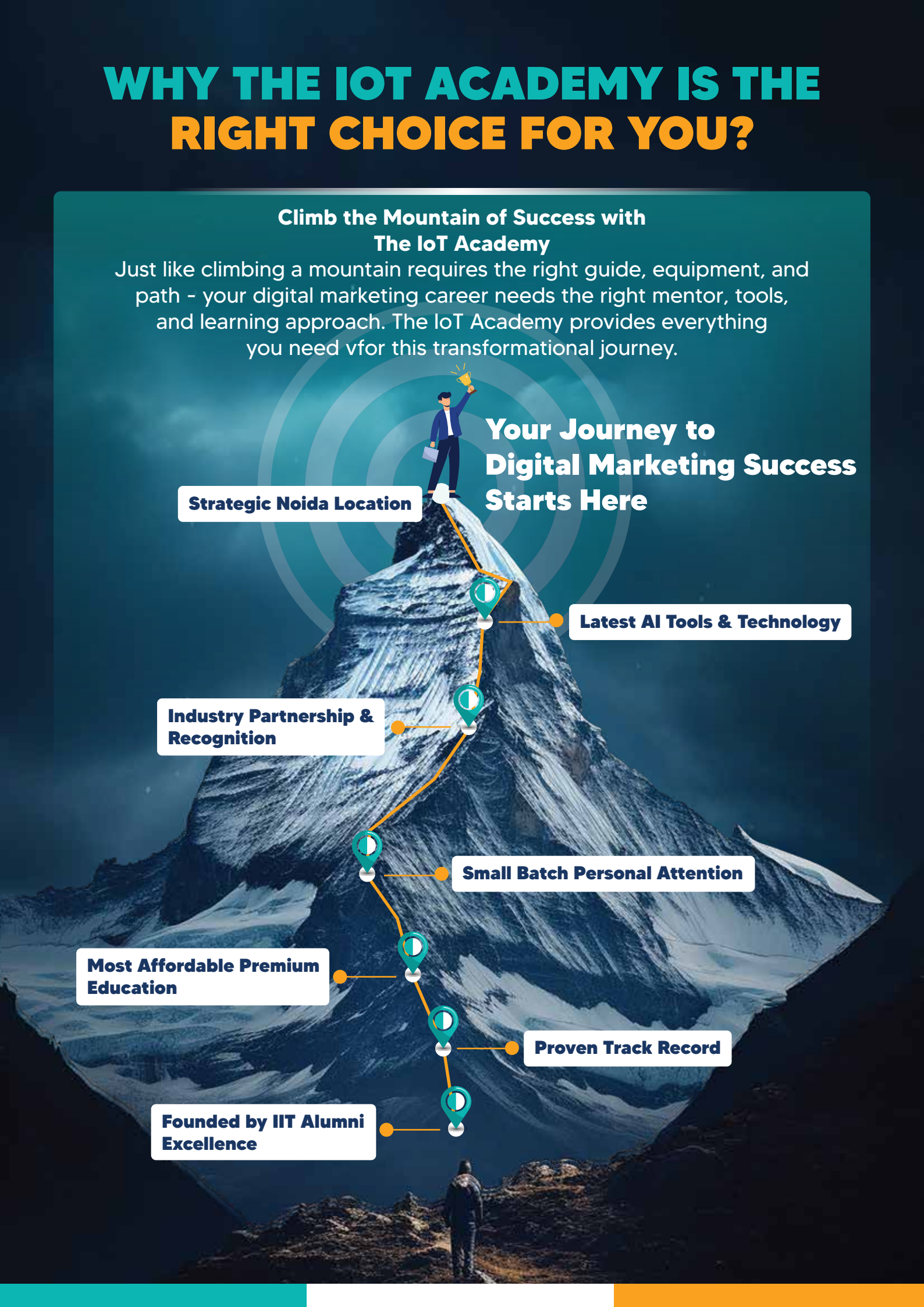
INDUSTRIAL VISITS FOR STUDENTS

- Organized immersive visits to leading IoT manufacturing facilities and smart-factory labs.
- Enabled learners to observe real-world deployment of embedded systems, edge computing, and sensor networks.
- Fostered practical insights through direct interaction with industry engineers and live project demonstrations.

WHY THE IOT ACADEMY IS THE RIGHT CHOICE FOR YOU?

Climb the Mountain of Success with The IoT Academy

Just like climbing a mountain requires the right guide, equipment, and path - your digital marketing career needs the right mentor, tools, and learning approach. The IoT Academy provides everything you need vfor this transformational journey.



PROGRAM HIGHLIGHTS

100% Practical,
Projects-Driven Training

1:1 Mentorship for
Faster Learning

Lifetime LMS
Access

Hands-on with AI tools:
ChatGPT, Jasper, Canva AI,
Copy.ai

100% Live Mentorship with
vIndustry Experts

PLACEMENTS & HIRING

78% Avg. Salary Hike
after Course

400+ Hiring
Partners

12,000+ Alumni
Network for Referrals

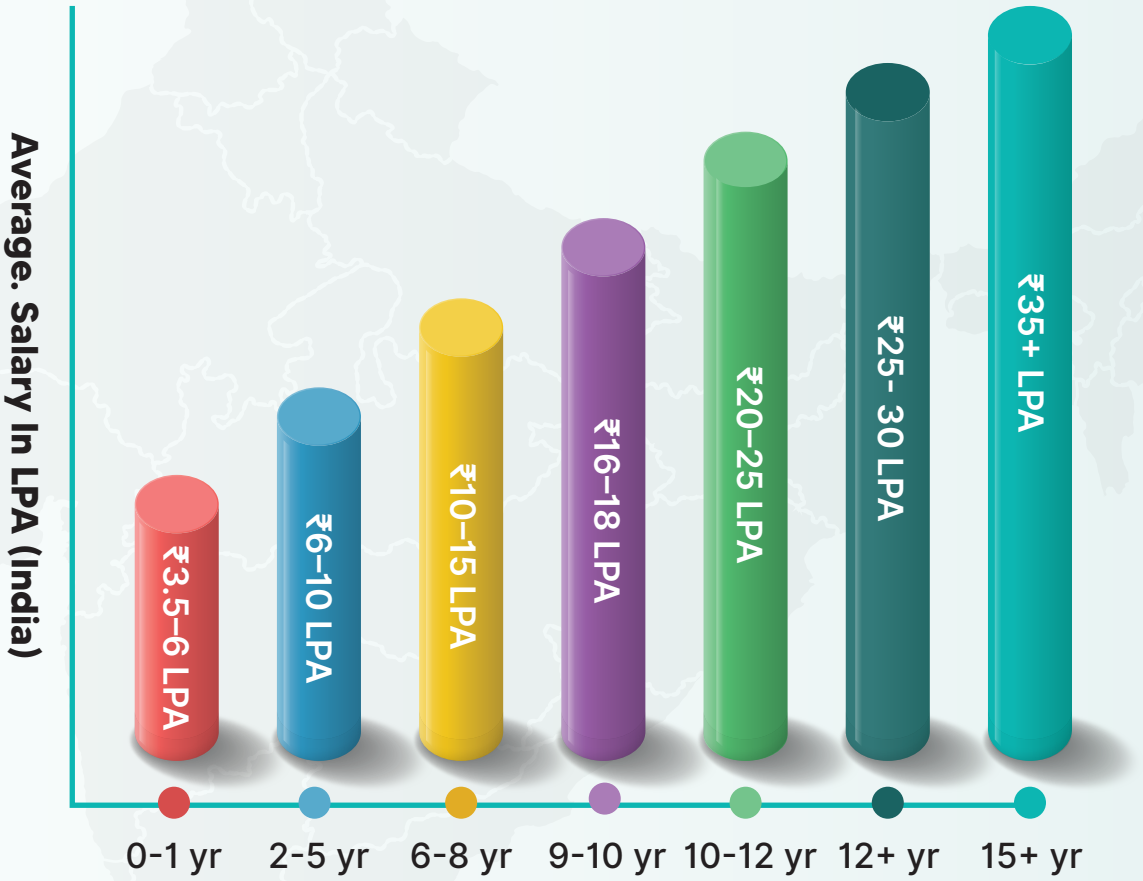
Resume, LinkedIn &
Portfolio Building

Interview Preparation
& Mock Sessions

WHO SHOULD JOIN THIS PROGRAM?

- Engineering students seeking cutting-edge tech skills.
- Software developers wanting hardware integration knowledge.
- Electronics enthusiasts ready to build smart devices.
- Professionals aiming for IoT leadership roles.
- Basic programming knowledge is helpful but not mandatory.

CAREER ROLES & SALARIES



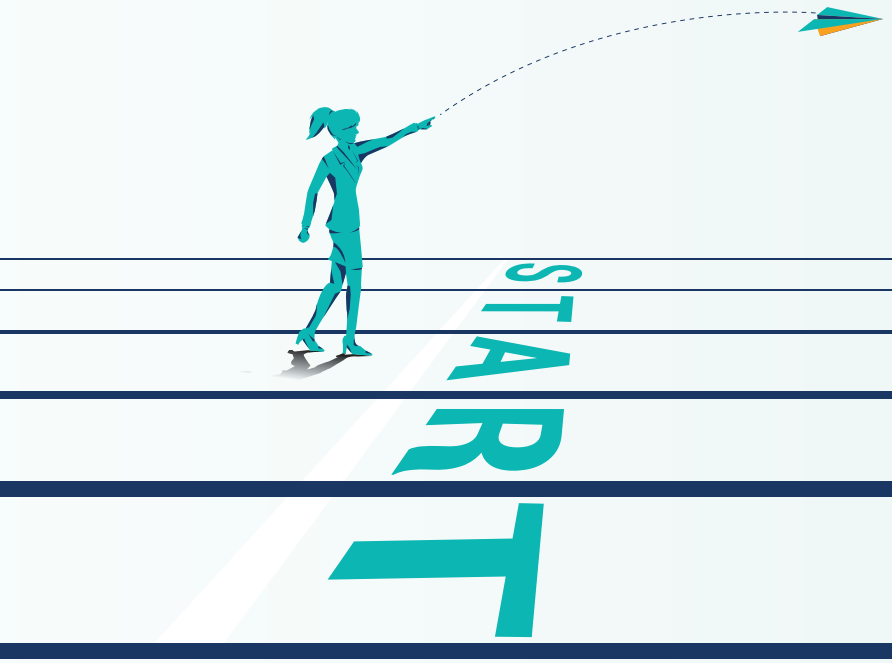
- Embedded Systems Engineer
- IoT Embedded Developer
- IoT Application Developer
- Embedded Linux Engineer
- Technical Lead (Embedded/IoT)
- Embedded Software Engineer
- PCB Design Engineer
- Systems Engineer
- R&D Engineer (Embedded/IoT)
- IoT Engineer

Why Learn
EMBEDDED SYSTEMS & IoT

- **High Demand:** Over 30 million connected IoT devices by 2026.
- **Wide Opportunities:** Manufacturing, automotive, healthcare, smart homes, agriculture.
- **Growing Importance:** Every industry needs smart, connected products.
- **Problem Solving + Creativity:** Design, build, and deploy real-world systems.
- **Edge Advantage:** Develop low-latency, reliable solutions on resource-constrained hardware.

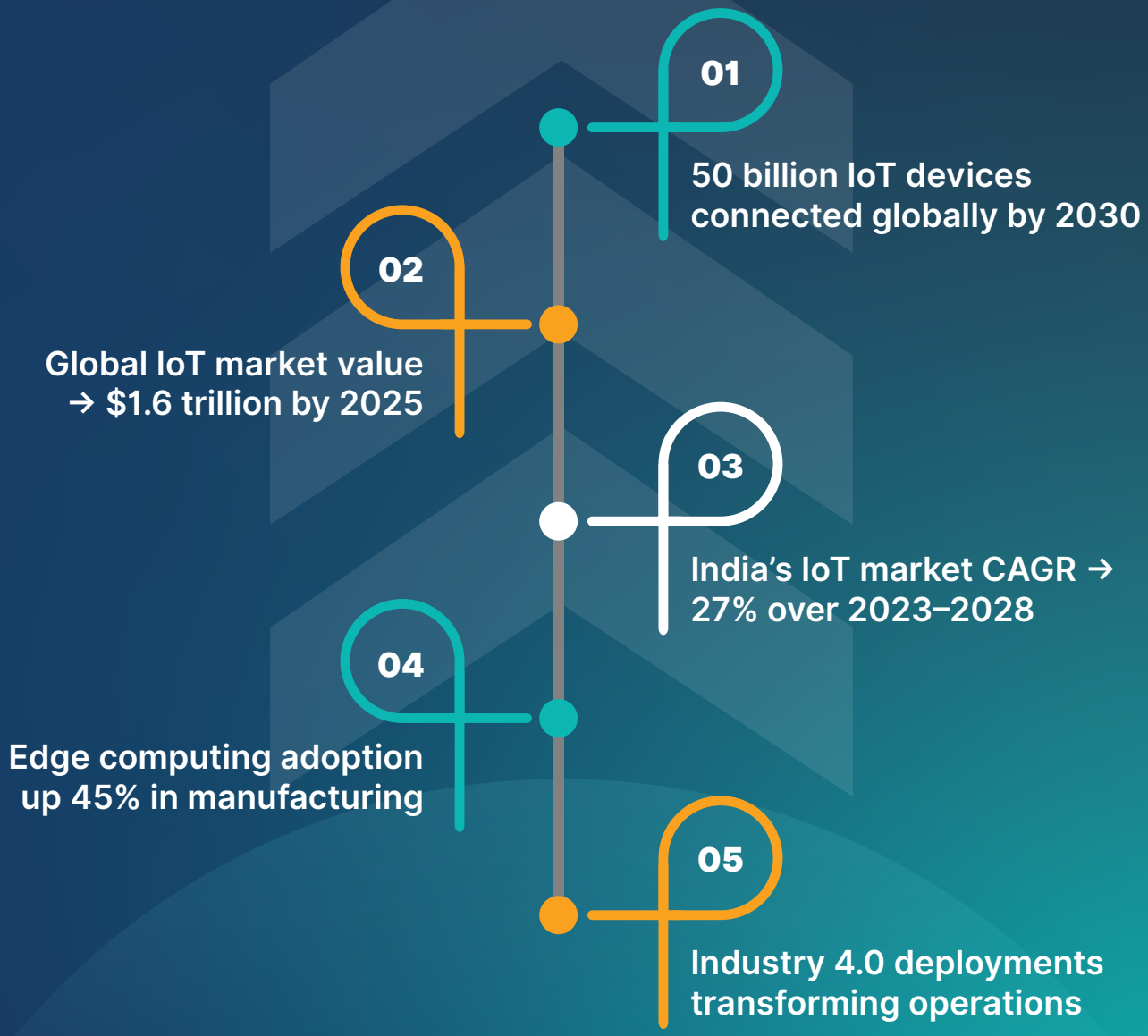
CAREER TRAJECTORY

Experience Level	Average Salary (India)
(0–2 yr)	₹3.5–6 LPA
(2–4 yr)	₹6–10 LPA
(5–7 yr)	₹10–15 LPA
(8+)	₹16-18 LPA
(12+ yr)	₹25–30 LPA



START CAREER WITH DIGITAL MARKETING COURSE

WHY EMBEDDED SYSTEMS & IOT
THE MARKET OPPORTUNITY



Professionals with Embedded & IoT expertise earn 25% higher salaries

HOW WE MAKE YOU JOB READY

Enroll & Learn from Experts

Work on Live Projects

Build Resume & Digital Portfolio

Get 1:1 Career Assistance

Crack Interviews & Get Placed

THE IOT ACADEMY EDGE

01 400+ Hiring Partners

02 Structured, Industry-Vetted Curriculum

03 Hands-on Practice with Real Campaigns

04 Resume & LinkedIn Optimization

05 12k+ Learners & Alumni Community

06 International Certification

PLACEMENT SUPPORT

WE

400+ Hiring Partner Opportunities

Access a vast network of 910+ hiring partners, giving you more chances to land interviews and secure your dream job.

Company-wise Interview Questions

Practice with real interview questions from leading companies to boost confidence and improve your selection chances.

Resume, LinkedIn & Portfolio Building

Get expert guidance to create a powerful resume, optimize LinkedIn, and build a portfolio that highlights your skills to employers.

Alumni Referral Network

Leverage our alumni working in top companies to get trusted referrals and unlock hidden job opportunities.

WANT YOU

THE IOT ACADEMY VS OTHERS

Factors	The IoT Academy	Other Institutes
Founder Background	IIT Alumni	Varied
Batch Size	10-15 students	50-100 students
Fee Structure	₹46,999 (with EMI)	₹70,000-₹1,00,000
AI Tools Training	Comprehensive	Limited/None
1:1 Mentorship	Daily sessions	Group sessions only
Placement Rate	70% salary hike	30-50% average
Industry Partnerships	IIT Collaboration	Limited
Live Projects	Real client work	Simulated projects

Why Students
CHOOSE US OVER COMPETITORS

Hemant Raj
Placed in MORPHEDO

The IoT Academy's Embedded System course was a game-changer for me! The hands-on projects helped me understand complex concepts easily. I feel confident in my skills now and ready for a career in IoT!

Dharmendra
Placed in AEONX DIGITAL

I loved the Embedded System certification course! The instructors were knowledgeable and supportive. The practical experience I gained was invaluable. I highly recommend this course to anyone looking to enter the IoT field!

Ritik Verma
Placed in MORPHEDO

Completing the Embedded System course at The IoT Academy was an amazing experience. The curriculum was well-structured, and I learned so much. I now have the skills to pursue my dream job in technology!

SUPPORT & CAREER GUIDANCE

Discover Strengths & Interests

Every learner has unique talents, skills, and passions but many are unsure how to identify and apply them in their career. That's where we step in. Through assessments, mentoring sessions, and hands-on exercises, we help learners discover what they're truly good at and where their genuine interests lie. This self-awareness becomes the foundation for making smarter career choices, ensuring that learners not only land a job but also enjoy long-term growth and satisfaction in their chosen field.

Explore Career Paths

The world of work is full of opportunities, but without proper guidance, learners often feel lost. We provide detailed insights into diverse industries, in-demand roles, and future career trends, helping learners explore multiple options before deciding on the right path. By understanding the scope, responsibilities, and growth potential of each career track, learners can confidently pursue the path that matches both their skills and aspirations—leading to meaningful and sustainable career success.

Prepare for Interviews

A strong resume can get you an interview, but it's the preparation that gets you the job. Our structured interview training includes mock sessions, role-specific practice questions, and personalized feedback to polish communication and problem-solving skills. Learners gain confidence in tackling tough questions, handling pressure, and presenting themselves professionally. With this kind of preparation, they enter interviews not just as applicants, but as top contenders ready to impress employers.

Build Professional Portfolios

In today's competitive job market, employers want proof of skills—not just promises. We guide learners in building professional portfolios that showcase real projects, case studies, and achievements. These portfolios act as a visual proof of their abilities, giving them a strong edge over other candidates. Whether it's tech projects, design work, research, or case studies, a well-crafted portfolio makes a lasting impression on recruiters and ensures learners are remembered long after the interview ends.

THE IOT ACADEMY
MILESTONES

78% Average Salary Hike	**₹40 LPA** Highest Package	**7000+** Success Stories
95% Placement Rate	**400+** Hiring Partners	**₹21 LPA** Average CTC

How to Enroll & Next Steps

ENROLLMENT PROCESS

Step 1: Free Consultation

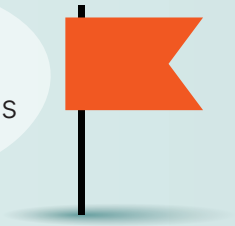
- Book a free career counseling session
- Understand your career goals and fit

Step 2: Trial Class

- Attend one free trial class
- Experience our teaching methodology

Step 3: Enrollment

- Choose your batch timing
- Complete admission formalities



Step 4: Begin Learning

- Start your transformation journey
- Access lifetime support system

Next Batch Details:
Batch Start Date: Every Monday

Class Timings:
Weekday Batch: **7:00 PM - 9:00 PM**
Weekend Batch: **10:00 AM - 1:00 PM**

Mode:
Live Online + Offline (Noida Center)

Batch Size:
Limited to 15 students

Result

DRIVEN SYLLABUS CHALLENGE

Embedded Systems & IoT

Program Curriculum

MODULE 1

Embedded C Programming Fundamentals

- C Variables and Constants
- C Preprocessor
- Control Flow Statements
- Functions & Call back Functions
- Array and String
- Pointer Concept
- Structures, Union & Enumerated Data Type
- C Memory Management
- Storage classes

MODULE 2

Introduction to Embedded Systems

- Fundamentals of Embedded Systems
- Sensors/Actuators
- Microcontroller units and Microcontroller Architecture (Arduino, ATmega16/32,168)
- About communication protocols (Serial port, SPI, I2C, UART, CAN, USB, Modbus)
- About peripherals (like ADC, Timers, RTC, Interrupts, Polling, DMA)
- Memory architecture and handling (stack, heap, cache)
- Application-Driven Selection of Microcontrollers
- Embedded Circuit Design basics
- Role of Arduino and AVR in embedded development
- Applications in IoT, robotics, automation, and automotive

Program Curriculum

MODULE 3

Interfacing with Arduino and ATmega16

- AVR architecture (ATmega16/32/328P)
- Memory organization (program, data, EEPROM, SRAM)
- I/O ports and registers
- Clock system, reset
- AVR toolchain (AVR-GCC, Atmel Studio, Proteus simulation)
- Arduino IDE setup and structure of a sketch
- Pin configuration and GPIO basics
- Digital I/O programming (LED, switch, buzzer)
- PWM control (LED brightness, motor control)
- Serial communication with Arduino IDE
- Writing Embedded C for AVR (low-level register access)
- ISR (Interrupt Service Routine) writing in C
- Comparison: Arduino functions vs AVR register-level code
- AVR timer modes (normal, CTC, PWM)
- Stepper motor control
- Servo motor control (Arduino Servo library vs AVR PWM)
- AVR Fuse bits and configuration
- In-System Programming (ISP)
- Code size and power optimization
- Relays for high-voltage switching

Program Curriculum

MODULE 4

Embedded with STM32

- Concept About STM32
- Concept about ARM platform
- Introduction to Microcontrollers (Based on Architecture Selected)
- ARM microcontroller Architecture
- Instruction set architecture - pipelines
- Registers banks/mode and states theory
- Clock and reset systems, timers and Memory Organisation
- IDE Configuration, Linker Script, Compiler Optimization Options
- Exception/Interrupt handling
- C and Embedded C Migration
- Memory /IO and peripherals - (I2C/SPI/UART/GPIO/Timer/PWM/ADC)
- Debugging tools like SWV debugger
- CAN interfacing with STM32 and Arduino
- Modbus communication with STM32
- Debugging & Optimization
- **Major Projects:**
  - Home Automation with Arduino + Relays + Wi-Fi
  - Digital Energy Meter with AVR + LCD + EEPROM
  - Smart Weather Station (Arduino + IoT)
  - Industrial Motor Controller (PWM + UART monitoring)
  - LoRa-based Remote Sensor Node (LoRa SX1278)

Program Curriculum

MODULE 5

Embedded RTOS (Real-Time Operating System) with STM32

- Introduction to Real-Time Systems Hard Real & Soft Real
- Difference between GPOS (Linux/Windows) and RTOS
- Applications: Automotive, Robotics, Aerospace, IoT
- RTOS kernel architecture
- Tasks/Threads & states
- Context switching & scheduling
- Latency in real-time systems
- Determinism & responsiveness
- Creating, deleting, suspending, and resuming tasks
- Task priorities & priority inversion problem
- Task scheduling algorithms:
- Multitasking vs Multiprocessing
- Inter-Task Communication
- Semaphores (binary, counting)
- Mutexes & priority inheritance
- Event flags/groups
- Message queues
- Time Management
- System tick timer
- Delays & periodic tasks
- Timer services in RTOS
- Interrupt handling in RTOS
- ISR (Interrupt Service Routine) vs Task handling
- Heap management in RTOS
- Module 9: Power Management in RTOS
- Low-power modes & sleep states
- Debugging & Optimization
- RTOS debugging tools (Tracealyzer, Segger SystemView)
- Lab Experiments (Hands-On)

- Lab Experiments (Hands-On)
  - Creating multiple tasks with FreeRTOS
  - Blinking LEDs with different priorities
  - Implementing delay using RTOS tick
  - UART communication using queues
  - Semaphore-based switch debounce
  - Interfacing sensor using RTOS tasks

MODULE 6

Introduction To IoT

What is IoT

- IoT application in different domains
- Trends in IoT Market
- Smart things
- Gate ways
- Middleware
- Edge vs Cloud functional partitioning

IoT Architecture

- Tech Stack.
- Hardware Development Platforms
- Software Development Platforms
- Communication Protocols
- Power Requirements in IoT
- Cloud, its components and IoT
- Data Streaming and IoT
- Data Store and IoT
- Analytics & Visualization and IoT IoT
- Security

Program Curriculum

NODEMCU (ESP8266)

- Install IDE Software
- Introduction to NODEMCU (Esp8266)
- Pinout of NODEMCU
- Programming Of NODEMCU
- Weather monitoring solution
- Automatic street lights

MODULE 7

Advanced Communication Protocols & Networking

Communication Protocols

- Introduction to communication architecture - Network protocol stack
- RF: ZigBee, BlueTooth, BLE.
- Communication Channels: GSM/GPRS, WiFi, LoRa & LoRaWAN
- NB-IoT, Comparison between different RF Technologies.
- IPv4 addressing problem for IOT and introduction to IPV6

SOCKETS

- Socket connection & Attributes
- Creating a Socket
- Socket Addresses
- Naming a Socket & Socket Queue
- Accepting Connections
- Requesting Connections
- Closing a Socket
- Socket Communications Processes

Program Curriculum

NODE-RED

- Installation of Nodejs,
- Installation of Node-Red,
- Building your first flows
- Basic nodes and flows
- A tour of the core nodes
- The Node-RED programming model
- Dashboards and UI techniques
- Local broker installation,
- Connection between local broker and Node-RED

MODULE 8

Cloud Computing & IoT Services

Cloud Computing

- Cloud Computing & Benefits of Cloud
- Deployment Models (Saas, Paas, Iaas)
- AWS-IOT Core
- Micro-Soft Azure
- Things-peak
- Google Firebase
- SQL and NoSQL Data bases
- Integration with MySQL
- IoT Cloud Platform: Device Management

IoT Security

- Introduction to mbed TLS and SSL
- Importance of IoT application
- AES encryption basis

Program Curriculum

IoT Cloud Services

- IoT Cloud Architecture
- Services-SAAS-PAAS-IAAS

Industry 4.0

- Introduction to Industry 4.0
- Road to Industry 4.0

Use Cases

- Automobile- basic overview
- Electrical Vehicle

MODULE 9

Embedded with Raspberry Pi by using Python

Python Programming Fundamentals

- Data types and type conversion
- Variables and basic operations
- Flow control
- Loops
- Lists, Set,Tuple and Dictionary
- Functions
- File Handling
- Class and Objects
- Modules & Packages
- Error/ Exception Handling

Program Curriculum

What is Linux

- Introduction to Linux
- History of Unix & Linux
- Linux distributions (Debian, Ubuntu, Fedora, Yocto, etc.)
- Open-source software & GNU philosophy
- Linux architecture: Kernel, Shell, File System, Utilities
- Logging in, working with shell (bash, ssh)
- Linux directory structure (/bin, /etc, /dev, /home, /proc, /sys)
- File operations: ls, cat, cp, mv, rm, touch
- File permissions & ownership (chmod, chown)

Introduction to Raspberry pi with Interfacing

- Setup and installation
- Basic Led blink
- PWM motor with R-PI
- Switch with R-PI
- Raspberry pi OS walkthrough
- Code execution and data generation
- ThingSpeak with R-Pi
- DHT11 sensor data by R-Pi
- Lora connectivity with Thingspeak R-Pi

MODULE 10

Embedded Linux

LINUX INTERNALS

- Linux internals
- Linux introduction and installation.
- Linux Shell Commands
- Shell Scripting
- Make Files
- Process Management
- File Operation
- Signals in Linux

Program Curriculum

- Linux Scheduler & Memory Management
- Linux Multi-Threading Programming
- Network Programming in Linux

Linux Porting

- Introduction, Setup & Hardware
- Toolchain & Hardware Practical's
- Bootloader U-Boot
- U-Boot Porting
- Customizing Bootloader
- Linux Kernel
- Kernel Porting & Compilation
- Kernel Modification
- Root File System
- Embedded Application Development

Linux - Device Drivers

- Introduction and Arch of Linux Device Drivers
- Kernel Module Programming
- Loadable kernel module
- Character Device Drivers
- Led Device Driver
- Uart device driver
- Process creation calls (fork,vfork,execv)
- LDDM (Linux Device Driver Model)
- Writing and testing of Board File
- what is the Device Tree
- Advantage for creating a Device Drivers

Yocto with Linux

- Yocto Architecture
- Recipes defines everything in Yocto
- Layers makes Yocto Modular & Structured
- Adding new Hardware support using BSP Layers
- Custom Distribution & Images

Certifications & Investment

Industry-Recognized Certificates

Upon successful completion, you'll receive:

- The IoT Academy Certificate in Embedded Systems & IoT
- ARM Accredited Engineer (AAE) Certification
- Cisco IoT Fundamentals Certification
- AWS Certified IoT Developer – Specialty
- Raspberry Pi Certified Developer
- EdgeX Foundry Practitioner Certificate

What's Included:

- 6 months of comprehensive training
- Lifetime LMS access
- 1:1 mentorship sessions
- Hands-on labs & real-world case studies
- Placement assistance
- All certification exam fees are covered
- Tools & hardware kit (worth ₹50,000+)

Course Investment & ROI

₹46,999
Total Course Fee

6 Months
EMI Options Available

Upto 30%
Scholarship Available

Average Salary Increase:

70%
(₹4–5 LPA to ₹7–8.5 LPA)

Course Fee Recovery Time: 5 months

READY TO TRANSFORM YOUR CAREER?

DON'T WAIT - THE DIGITAL FUTURE IS NOW!

Join thousands of successful professionals who transformed their careers with The IoT Academy. ***Limited seats available.***

BOOK YOUR FREE CONSULTATION TODAY!

The IoT Academy - Where Technology Meets Opportunity
Empowering India's Digital Workforce Since 2017

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