



**Bharat Institute
for Skill Development**

Skill Today | Success Tomorrow

PROFESSIONAL CERTIFICATE IN IOT

EMBEDDED SYSTEMS • ESP32 • CLOUD
MQTT • INDUSTRIAL IOT • AI



90 HOURS

BEGINNER TO INTERMEDIATE LEVEL



BUILD • CONNECT • AUTOMATE • ANALYZE
CREATE THE CONNECTED WORLD OF TOMORROW



**HANDS-ON
LEARNING**



**CLOUD
INTEGRATION**



**MQTT & REAL-TIME
COMMUNICATION**



**DASHBOARDS &
DATA ANALYTICS**



**SECURE & INDUSTRIAL
IOT SOLUTIONS**



Bharat Institute
for Skill Development

MEP STRA

vipany
GLOBAL

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STPI



PROGRAM OVERVIEW

A **90-hour**, industry-oriented IoT program designed to take you from fundamentals to real-world intelligent IoT solutions.



90 HOURS

30 Sessions
(3 Hours Each)



LEVEL

Beginner to
Intermediate



MODE

Hands-on
Learning



CERTIFICATE

of Completion



WHO IS THIS FOR?



Engineering & Diploma
Students



Working Professionals
& Industry Aspirants



Developers, Makers &
Tech Enthusiasts



Anyone passionate about
IoT & Smart Technologies

WHAT YOU WILL LEARN

Build. Connect. Automate. Analyze. Secure.

Master the technologies that power the connected world.



**IoT Architecture
& Fundamentals**

Understand the building
blocks of IoT systems



**Sensors, Actuators
& ESP32**

Interface, program & build
smart embedded systems



**Connectivity &
Communication**

Wi-Fi, BLE, LoRa,
MQTT, HTTP & more



**Cloud Platforms
& Integration**

Firebase, ThingsBoard,
Blynk, Node-RED & more



**Data, Dashboards
& Visualization**

Real-time data monitoring,
analytics & insights



**Edge Computing
& Smart Processing**

Process data at the edge
for faster decisions



**Security & Safety
in IoT**

Secure devices, networks
& data



**Industrial IoT
Applications**

Predictive maintenance,
monitoring & automation



**Industry-Relevant
Curriculum**

Designed with real-world
applications in mind



**Hands-On &
Project-Based**

Learn by building
end-to-end solutions



**Future-Ready
Skills**

Stay ahead in the era of
connected intelligence



**Career & Innovation
Focused**

Build solutions that
solve real problems





YOUR 90-HOUR **LEARNING JOURNEY**

From Fundamentals to Future-Ready IoT Solutions



HANDS-ON PROJECTS YOU WILL BUILD

01 SMART AGRICULTURE Monitor soil, weather & environment in real time for better crop decisions & automation. 	02 SMART ENERGY METER Measure & analyze energy consumption with real-time data, alerts & cloud dashboards. 	03 SMART HOME Control lights, appliances & devices remotely with automated schedules & sensors. 	04 INDUSTRIAL MACHINE MONITORING Monitor machine health, performance & downtime using sensors & real-time analytics. 	05 SMART EV CHARGING STATION Build an intelligent EV charging solution with monitoring, billing & remote control.
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TOOLS & TECHNOLOGIES YOU WILL WORK WITH

ESP32 Powerful IoT Microcontroller	C / C++ Embedded Programming	MQTT Lightweight Messaging	Node-RED IoT Flow Development	Firebase Backend & Real-time DB	ThingsBoard IoT Platform & Dashboard	Blynk IoT App Development	Python Data Analytics & AI

 INDUSTRY-ORIENTED CURRICULUM Learn what industry actually uses.	 HANDS-ON LEARNING Build. Test. Debug. Real-world experience.	 CERTIFICATE OF COMPLETION Showcase your skills with confidence.	 FUTURE-READY CAREER PATH High-demand skills for tomorrow's jobs.
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AFTER 90 HOURS, YOU WILL **BE ABLE TO**

Gain practical skills and build a strong portfolio of real-world IoT solutions.



Build IoT systems using ESP32 & sensors



Process data at the edge for smarter decisions



Interface and control sensors & actuators



Implement IoT security & data protection



Communicate using MQTT, HTTP & WebSockets



Work with industrial protocols & applications



Connect to cloud platforms and manage data



Apply analytics & AI for better insights



Create dashboards & visualize real-time data



Develop and showcase a complete IoT project



CAPSTONE PROJECT – CHOOSE YOUR PATH

- 1 Smart Agriculture Monitoring System
- 2 Smart Energy Meter with Cloud Dashboard
- 3 Smart Home Automation System
- 4 Industrial Machine Monitoring System
- 5 Smart EV Charging Station



ASSESSMENT & CERTIFICATION



Continuous assessments, practical assignments & quizzes



Capstone project evaluation & presentation



Receive a **Professional Certificate** in **IoT (90 Hours)**



Industry-relevant skills for real-world opportunities



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CREATE THE **SMARTER,**
CONNECTED WORLD OF **TOMORROW.**



Get in Touch >



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India



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