

Since 2007, Making IT Experts & Products

Course: Embedded Systems & Edge AI

Duration: 300 Hrs (Changeable) | Fees: Individual / Batch

Since 2007, Nestsoft TechnoMaster has been providing training, internships, and services in IT technologies, both online and offline, with the expertise of **over 250 industry experts**. We have delivered internships, training, and seminars to more than 50,000 students, resulting in numerous success stories. **We offer 100% placement support through JobsNEAR.in**

Our Courses/Internship

- Python/Django Fullstack
- Artificial Intelligence
- Machine Learning
- Data Science
- Software Testing (All)
- Wordpress, Woocommerce
- Digital Marketing, SEO
- Php/MySQL, Laravel
- Flutter, Android, IOS
- Asp.net MVC
- Web Design, Javascript
- Angular JS, React JS
- CCNA, MCSA, CCNP
- AWS, GCP, Azure
- Odoo, Salesforce, Sap
- Microsoft Excel
- Ethical Hacking



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Syllabus on the Next Page ..



Our Head Office: Nestsoft TechnoMaster, Infopark, Cochin - 42, Kerala, India

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- * Embedded Systems & Edge AI Curriculum

Month 1: C/C++ Programming & Hardware Fundamentals

bitwise operations and advanced C/C++ for embedded systems, memory management, pointers, and techniques. * Microcontroller architecture, GPIOs, timers, interrupts, and hardware debugging

Month 2: Communication Protocols & Peripherals

* Interfacing serial communication protocols: UART, SPI, I2C, CAN bus, and USB. configuration. * Sensor and actuator integration, ADC/DAC signal processing, and DMA controller

Month 3: Real-Time Operating Systems (RTOS)

kernels. * Core RTOS concepts: task scheduling, priorities, context switching, and preemptive event groups. * Inter-task communication using FreeRTOS: queues, semaphores, mutexes, and

Month 4: Edge Computing & Linux Embedded Systems

cross-compilation and embedded Linux development, kernel configuration, device trees, and (Raspberry Pi/Edge) gateway architecture, hardware acceleration, and containerization on SBCs

Month 5: TinyML & On-Device Machine Learning

techniques. * Deep learning fundamentals optimized for edge devices and model quantization Impulse. * Deploying neural networks using TensorFlow Lite for Microcontrollers and Edge

Month 6: Vision/Audio AI Acceleration & Industrial Capstone

Nano/Xavier and AI acceleration for computer vision and audio processing using NVIDIA Jetson industrial deployment. Designing and building a fully integrated real-time Edge AI hardware prototype for

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- Thank You -

N.B: This syllabus is not final and can be customized as per requirements / updates.

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