

Internship on Embedded System, Industry Automation and Robotics



Contact Us: manikandan29@gmail.com, softroniics@gmail.com
Internship Coordinator - 9037291113, 9995970405

Softroniics

An iso 9001:2008 Certified Company

Calicut || Palakkad || Coimbatore

Contact: 9037291113, 9995970405

Why Internship?

We are all aware of the fact that getting an Engineering degree from a good college matters a lot, but the degree won't hold much of a value if you are not able to apply the knowledge in the real business world. Internships give students their first exposure to working in an organization and also a flavor of the functional area they are interested in pursuing later in their careers. Completing Internship is deemed necessary these days in most of the Engineering Colleges. Employers give a lot of weightage to the Internship of the students during placement. Having Internship from a good company and with meaningful function knowledge is considered as a big plus point for the Engineering students.

Internship provides a chance to individuals to choose the industry of their choice, develop knowledge on that industry, learn how to work with a team, increase the likelihood of building professional networking contacts, gives them a chance to face real time challenges, they learn how to interact with clients and so on. Many times it has been noticed that if the performance of the intern is very good then there are high chances of getting an offer letter at the end of the internship program.

Softroniics comes up with a Internship opportunity in Embedded systems, industrial automation and Robotics (S.I.O.E.R). This program is pegged at giving in depth fundamental knowledge and exposing students to practical working environments of the industry. This is the program for those who have a passion for technology and think that this is the only way to bridge the gap between theory (whatever is taught in the classroom) and practical (what is used in the industry).

Softroniics

An iso 9001:2008 Certified Company

Calicut || Palakkad || Coimbatore

Contact: 9037291113, 9995970405

S.I.O.E.R is a program where you will be given the complete in and out training starting right from the basics of microcontrollers, PLC which are specifically used in the Indian Embedded Industry and we do provide a certificate which will help you out with your placements. As we said, it's a platform for those who have the passion for embedded systems and want to enhance their knowledge.

INTERNSHIP STRUCTURE

Fundamentals of Embedded system

- Introduction to Embedded systems
- Exposure to different architectures (RISC vs. CISC)
- Application of Embedded systems in today's world.
- Embedded Systems in Industry.

Fundamentals of PIC

- Introduction to PIC family.
- Learning PIC used in the board.
- Getting used to the platform.
- Using PIC programmer for programming.
- Assembly vs. C

Softroniics

An iso 9001:2008 Certified Company

Calicut || Palakkad || Coimbatore

Contact: 9037291113, 9995970405

C programming for PIC

- o Introduction to C
- o Data Types, operators and expressions
- o Rules for a header file
- o Creating header files

Embedded C programming

- Configuring ports and controlling their status
- Interrupts and timers
- Accessing internal registers and EEPROM

Interfacing

- PWM based motor speed control
- PWM based led brightness control
- ADC based applications
- UART (RS-232)
- I2C
- SPI

Softroniics

An iso 9001:2008 Certified Company

Calicut || Palakkad || Coimbatore

Contact: 9037291113, 9995970405

Interfacing Peripherals

- o RF Transmitter and Receiver
- o DTMF
- o Accelerometer
- o Servo motor
- o HC 05 Bluetooth Module
- o MATRIX KEYPAD

Introduction to RTOS

- o Real time system concepts (OS vs. RTOS)
- o Need for an RTOS
- o RTOS applications/examples.

INTRODUCTION TO AUTOMATION

- Brief Description of a Control System
- Pneumatic Controller, PID Controller, PLC Controller
- History & Need of Industrial Automation
- Application of Industrial Automation

Softroniics

An iso 9001:2008 Certified Company

Calicut || Palakkad || Coimbatore

Contact: 9037291113, 9995970405

GETTING FAMILIAR WITH PLC

- Type of PLC
- Hardware & Architecture of PLC
- Application and Advantage of PLCs
- Sourcing and Sinking concept
- Programming Language of a PLC
- Introduction to field Device(Input / Output)
- Data files in PLC Programming
- Brief Description of a Logic Gates
- Simulator analysis of a PLC Programming
- Communication with PLC
- Wiring different field device to PLC
- Uploading, Downloading & Monitoring programs
- Introduction to SFC
- Introduction to Instruction List
- Introduction to Ladder Logic

Softroniics

An iso 9001:2008 Certified Company

Calicut || Palakkad || Coimbatore

Contact: 9037291113, 9995970405

ADVANCE PROGRAMMING IN PLC

- Introduction to jump and label instruction.
- Introduction to SBR and JSR instruction.
- Forcing of I/O
- Monitoring/Modifying Data table values
- Hands on experience on real time applications
- Fault finding/troubleshooting and documentation
- Interfacing proximity sensor with PLC
- Interfacing with Relay
- Control circuit designing with feedback concept.

LADDER LOGIC PROGRAMMING

- Comparison b/w Gates, Relay Logic& ladder logic
- Description of using Memory bit in a programming
- Mathematical Concept ADD,SUB,MUL,DIV and etc
- Logical Concept AND,ANI,OR,ORI, EXOR,NOT etc
- Special Function MOV,SET,RST,CMP,INC,DEC
- Programming based on Timer And Counter

Softroniics

An iso 9001:2008 Certified Company

Calicut || Palakkad || Coimbatore

Contact: 9037291113, 9995970405

Projects to be done

- o Temperature controlled Fan
- o Emergency lighting system
- o Implementation of PWM for speed control of motors
- o Servo motor control
- o PCB designing
- o Implementation of RTC
- o SPI communication between Microcontrollers
- o Solar Panel based battery charger
- o closed loop unit based on PLC

Main Project

- O Plant visit of client (Crystalpet)
- O Project Design
- O Implementation
- O Prototype Demo

Softroniics

An iso 9001:2008 Certified Company

Calicut || Palakkad || Coimbatore

Contact: 9037291113, 9995970405

OTHER INSTRUCTIONS

During your internship period as, you will be regularly appraised through oral or written communication by your Team Leader (TL). Intern is not supposed to use mobile phone during the working hours. Also not supposed to take more leaves than permitted.

On successful main project completion the candidate will get certificate from the client and from Softroniics. Placement references will be given at the end of four months internship period.

There are ample companies which offer job for internship completed candidates. Based on your area of interest you can choose from the following kind of companies:

- 1.) Electronics Industry
- 2.) Communication Sector
- 3.) Microprocessor Companies
- 4.) IT Sector

Our Placement partners



Softroniics

An iso 9001:2008 Certified Company

Calicut || Palakkad || Coimbatore

Contact: 9037291113, 9995970405