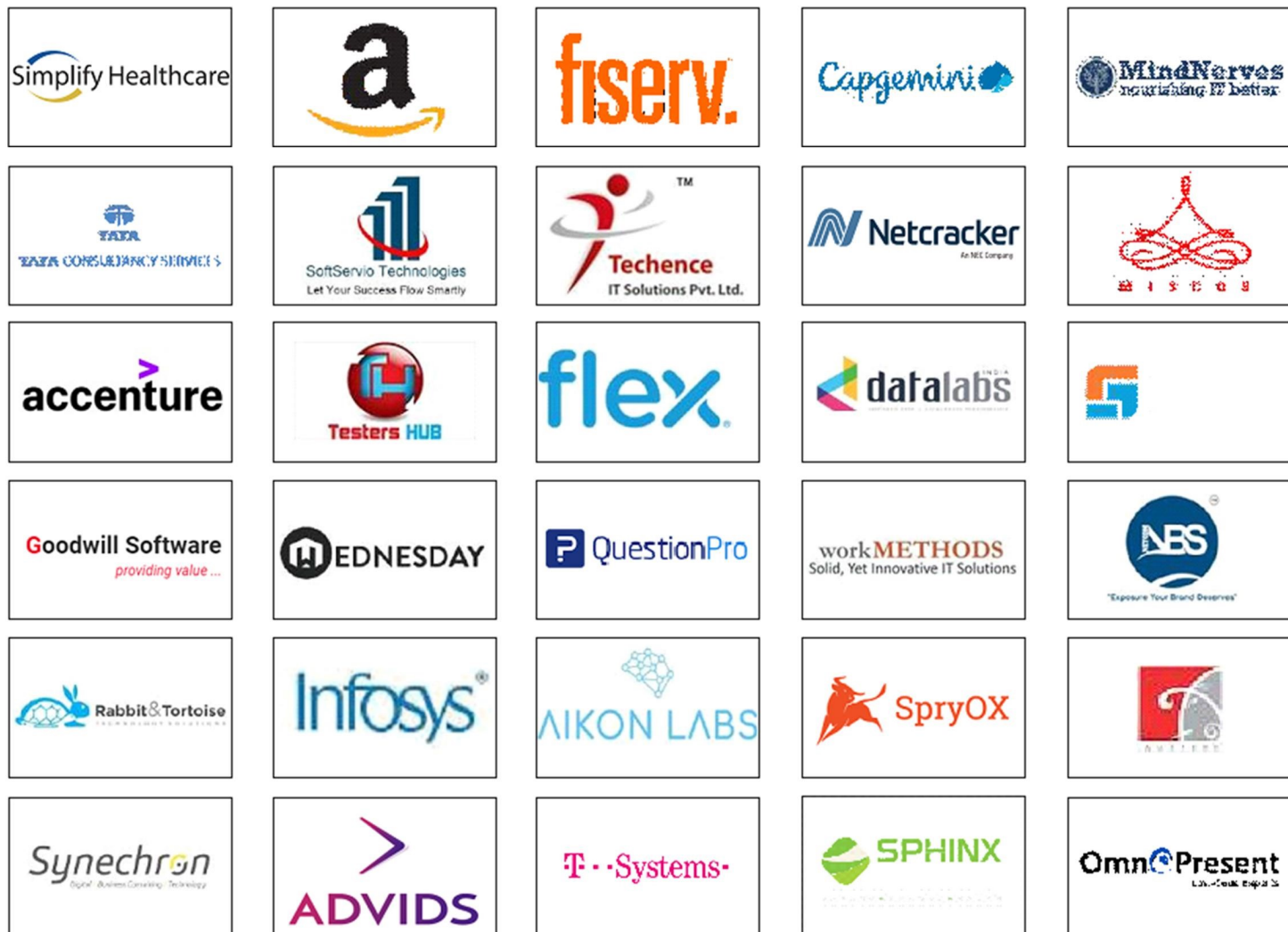


OUR ALUMNI WORKING WITH



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SINCE -2011
+12 Years Expert,
+100 workshop,
+300 Seminar,
Thousand's of Students
Learn Every Year,
On Job Training,
Placement,
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We do
 More than Institutions
 Trusted Manufacture on
IndiaMart
Amazon
Gem
JustDial

Lab of 1200Sq.Ft
Fully Equipped
Online and Offline
Training ability
Weeks, Months and
Year

Types of courses

We do start from very
 basic for more
 understanding

COURSES

All about Electronics
Programming C with micros
Programming C++, Opps
Programming Python, Data science
Programming PLC
Industrial Automation
8051, Arduino, AVR, STM32,
Raspberry pi, pico
Robotics
ARM, PIC etc..

TECHANICAL

PLC Delta, siemens
Allen Bradley
HMI, VFD,
hydraulic and pneumatic
8051, AVR, PIC, ARM, ESP8266
ESP32, Arduino, STM, Rpi,
MATLAB, C, C++,
Python, Java,
Data science etc..

Pune, Nashik, Jalgaon
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About Training



Placement courses

Industrial Automation

Module 1 :

Introduction to Industrial Automation Overview of industrial automation and its importance in various industries Basics of control systems and their components Role of sensors, actuators, and controllers in automation Electrical Systems and Components Electrical safety guidelines and regulations Understanding electrical symbols and diagrams Basic knowledge of motors, relays, switches, and circuit breakers PLC (Programmable Logic Controller) Fundamentals: Introduction to PLCs and their applications in automation PLC programming concepts and languages (ladder logic, function block diagram) Input and output modules, wiring, and addressing

Module 2 :

Fundamentals of PLC, Basic of PLC, PLC History, PLC Architecture, & Block Diagram, PLC Application, PLC Hardware Components, Types of I/P & O/P, Input Selection, Discrete I/O Modules, Analog I/O Module, Special I/O Module, Specification of Digital & Analog I/P & O/P Module, Relay Basics & their Practices, SET, RET, Relay Type, Logical, Mathematical & Floating Point Instruction, Concept of Timer, TMR Instruction, ON/OFF delay Timer, Cyclic Timer, Counter Instruction, UP Counter, Down Counter, Cascading Counter, Control Relays, Contactors, Motor Starter, Manually & Mechanically Operated Switches, Push Button, Selector Switch, Limit Switch, Proximity Switch, Reed Switch.

Module 3 :

Output Control Devices, AC Motor, Dc Motor, Solenoid Valve, Bulb, Diff Between Analog & Digital Signal, Type of Analog Signal, Vtg Type & Current Type Analog Signal, Introduction to PLC Programming Language, Ladder Diagram, Instruction List, FBD, Fundamental Logics, Equivalent Relay Logic for Ladder Diagram, Sequencing, Interlocking & Latching principles, Standard Procedure for writing a Ladder Diagram, Basic & advance PLC Instruction, Timer & Counters Programming, Real PLC Interfacing with Devices & Model.

Module 4:

Human-Machine Interface (HMI): Overview of HMIs and their role in industrial automation Designing and creating user-friendly HMI screens HMI programming and connectivity with PLCs Industrial Communication Protocols: Understanding different communication protocols used in industrial automation (e.g., Modbus, Profibus, Ethernet/IP) Configuration and troubleshooting of communication networks Industrial Sensors and Actuators: Overview of various types of sensors used in industrial automation (temperature, pressure, flow, level sensors) Actuators (valves, motors, solenoids) and their control in automation systems Calibration and maintenance of sensors and actuators

Module 5:

Advanced programming techniques (timers, counters, math functions) Sequential function charts (SFC) for complex control sequences PID control and tuning in PLCs SCADA (Supervisory Control and Data Acquisition) Systems: Introduction to SCADA systems and their role in industrial automation SCADA software configuration and programming Real-time data monitoring, alarming, and historical data logging Industrial Networks & Fieldbuses:

Advanced understanding of industrial communication protocols (e.g., OPC, Profinet, Device Net) Network topologies and architectures (ring, star, bus) Industrial Ethernet, wireless communication, and cybersecurity considerations Industrial Control Panel Design Design principles and standards for industrial control panels Component selection and layout considerations Electrical drawings and documentation for control panels Safety Systems and Standards.

Module 6 :

- *Hands-On Programming & Simulation with Industrial PLCs
- *Customized Curriculum Tailored to Onsite Equipment & Processes
- *Emphasis on Troubleshooting, Diagnostics, and Fault Finding
- *Practical Application with Real-World Scenarios & Case Studies
- *Safety Protocols, Best Practices, and Documentation Standards

Industrial Automation Projects: Hands-on projects to design, implement, and troubleshoot industrial automation systems Integration of various components (PLCs, HMIs, sensors, actuators) to create a functional system Project documentation and reporting

Feature:

**Practical Learning, Hardware Interfacing
Project-Based Learning, Sensor Integration,
Circuit Design and Prototyping,
Programming Microcontrollers
Actuator Control, System Integration and Debugging
Troubleshooting and Debugging Skills,
Practical Application of Knowledge**

Our Alumni



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Embedded System

Module 1 : Basic Electronics

Introduction to Electronics and Electronic Components, basic concepts of voltage, current, and resistance, Ohm's law and its applications, Introduction to electronic components: resistors, capacitors, and inductors, Circuit Analysis and DC Circuits, Electronic Components and Circuit Building, Introduction to Digital Electronics and logic gates . Mini project based on PCB designing, testing of components logic gates, op-amp, IC555, etc.

Module 2 : Arduino

Introduction to Arduino, Setting up the Arduino IDE, Arduino Programming Fundamentals, Introduction to Arduino programming language (based on C/C++), Variables, data types, and operators in Arduino, Conditional statements and loops, Functions and libraries in Arduino, Working with different module like LED, Keys, LCD, Seven segments, DC motor. Stepper motor, servo motor, projects, Arduino, Serial communication: sending and receiving data between Arduino and a computer, Sensor Integration and Project Development.

Module 3 : 8051

Introduction to 8051, architecture of controller, Memory Organization : (RAM, ROM, SFRs), 8051 assembly programming basic , Writing & Executing Simple Program using c Language, what is Timer & Counter, Interrupt & their handling in 8051, C Programming for 8051. getting interfacing with keil IDE, Interfacings LED, switch, LCD, DC Motors, robots, etc.

Module 4 : Raspberry Pi

Introduction to Raspberry Pi, Setting up Raspberry Pi (hardware setup, operating system installation), Introduction to Linux and the Raspbian operating system, Python Programming on Raspberry Pi, Setting up Python on Raspberry Pi, .

Introduction to Python, Basic Python Syntax Variables and data types, Operators and expressions, Conditional statements (if, elif, else), Loops (for and while loops) Functions and Modules, Defining and calling functions, Function parameters and return values , Using modules and importing libraries, Creating and using custom modules , GPIO programming, LED, switch, DC Motors, stepper motor, project on Rpi, weather monitoring, data logger, data analysis.

Module 5 : IoT (Internet of Things)

Introduction to IoT, Exploring real-world applications of IoT, IoT architecture and components, IoT protocols and communication technologies, IoT Hardware and Sensors, Introduction to IoT hardware platforms (Arduino, Raspberry Pi), Overview of common IoT sensors (temperature, humidity), IoT Communication and Networking, Introduction to wireless communication protocols (Wi-Fi, Bluetooth) IOT with ESP8266, ESP32, Node MCU

Feature: Practical Learning, Hardware Interfacing
Project-Based Learning, Sensor Integration,
Circuit Design and Prototyping,
Programming Microcontrollers
Actuator Control, System Integration and Debugging
Troubleshooting and Debugging Skills,
Practical Application of Knowledge

Our Alumni



Naveen Katkam
Lead Engineer at GE Power



Eshan Inamdar
Consultant | Data Analytics
EXL Panvel, Maharashtra,
India



Rahul Wadhai
Experienced Automotive
Tata Elxsi



Shubham saraf
Automation Engineer at
Nimbus Automation Solution
Pvt Ltd.

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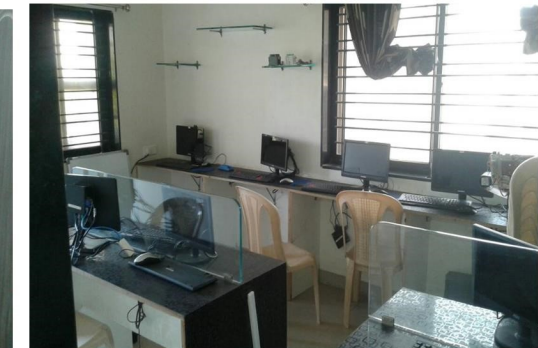
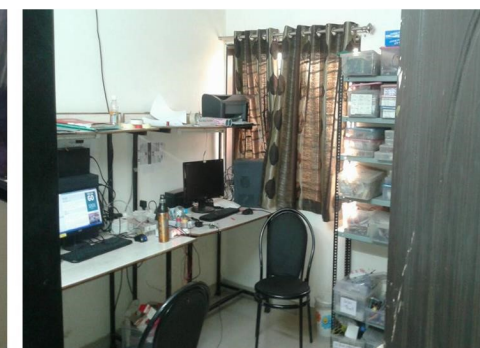
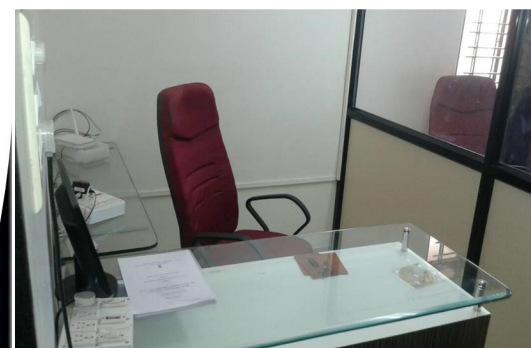
ABOUT COMPANY

Established in the year 2011, our Electrosoft System, is one of the reputed names engaged in training, manufacturing and supplying extensive range of Data Communication, PLC, Device, Networking and Embedded Systems. Our strict adherence to quality has helped us to carve a niche for ourselves in the field of electronics and industrial automation data communication. We are facilitated with a technologically advanced infrastructure that is the epicenter of all our endeavors. Our infrastructure is manned by a competent workforce that is our biggest asset. The workforce comprises dexterous professionals, who are engaged in managing all our business operations. We are looking forward to expand our horizons and making our presence felt worldwide. As an integrated part of our expansion plan, we emphasize on forging strategic relationships with companies.



www.electrosoftsystem.com

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Data Science, AI and ML

Master in Electronics

Module 1 : Beginner

6 Month

Basic of electricity, All about components , Semiconductors, Analog Electronics Phasors and Complex Impedance, Frequency Response, AC Power and Power Factor, Op-Amps, Amplifier Configurations (Inverting, Non-inverting, Differential), Transistor Amplifiers, Common Emitter, Common Base, and Common Collector Configurations, Numbers systems, Digital Electronics, Binary logic developments, IC Technologies , TTL,CMOS, ECL, BiCMOS, GaAs, ASIC, FPGA, MEMS, SoC ,Power ICs, Circuit designing techniques, IC integrated Circuits, SMD components basic Live consumer based project

Module 2 : Intermediate

6 Month

Basic of coding, C programming, C++, Data structure, Arc of Microcontroller vs Microprocess, theory of interfacing devices, all interfacing with Arduino, 8051 with ASM and interrupts, timers, counters, serial, I2C, basic of AVR, PIC, programming with all device, STM32, ESP8266, ESP32, Internet of things, basic structure of IoT, making weather monitoring system, agricultural data monitoring, thing speaks, web based application, Fundamentals of PLC, Basic of PLC, PLC History, PLC Architecture, & Block Diagram, PLC Application, PLC Hardware Components, Types of I/P & O/P, Input Selection, Discrete I/O Modules, Analog I/O Module, Special I/O Module, Specification of Digital & Analog I/P & O/P Module, Ladder Diagram, Instruction List, FBD, Fundamental Logics, Equivalent Relay Logic for Ladder Diagram, Sequencing, Interlocking & Latching principles, Standard Procedure for writing a Ladder Diagram, Basic & advance PLC Instruction, Timer & Counters Programming, Real PLC Interfacing with Devices & Model.

Module 3 : Advanced

6 Month

Competitive coding, Micro C Programming, Python coding, Flask, Raspberry pi, Pico, LoRa, Introduction to Linux, Choosing and installing a Linux distribution Linux Command Line Basics, Navigating the file system, Working with files and directories, File permissions and ownership, Using the command line for everyday tasks, Linux System Administration Shell Scripting, Introduction to shell scripting , handle real-time applications, Task Management, Prioritization and Scheduling, key characteristics of an RTOS, Interrupt Handling, RTOS allows for efficient management, Inter-Task Communication and Synchronization, RTOS offers a set of kernel services, including timers, semaphores, mutexes, message queues, and event flags, RTOS includes memory management mechanisms to allocate and deallocate memory dynamically, RTOS provides tools and features for debugging and analyzing real-time applications

Master in Computers

Module 1 : Beginner

6 Month

Hardware, Software, Operating System, Data Representation, Central Processing Unit (CPU), Memory, Storage, Input/Output (I/O), Networking and Internet, Programming, Algorithms, Security, Computer Architecture, Software Development Lifecycle, Ethical and Legal Considerations, Digital Electronics and number system, logic gates, binary operations , FF, shift registers, counters, memory registers, arc of RAM, arc of ROM, Microsoft tools, Linux tools, Android tools, Types of Coding, C Programming, data types, variables, operators, design making [if,else , switch, goto], Loops [for, while, do while], array [1D, 2D, 3D], pointers, functions, file handling, structure, union, macros in c programming , data structure, Arrays, Linked Lists, Stacks, Queues, Trees, Algorithms and Operations, Recursive Data Structures

Module 2 : Intermediate

6 Month

Introduction to Object-Oriented Programming, Classes and Objects, Constructors and Destructors, Inheritance and Polymorphism, Encapsulation, Function Overloading, Operator Overloading, Templates, Exception Handling, File Handling, Python, including variables, data types, operators, control flow statements (if-else, loops), and functions. Data Types: Working with different data types such as integers, floats, strings, lists, tuples, dictionaries, and sets. Functions: Defining and calling functions, passing arguments, returning values, and understanding scope and local/global variables. File Handling: Reading from and writing to files, Modules and Packages: Importing and using modules and packages to extend the functionality of Python, organizing code into reusable modules. Libraries and Frameworks: Exploring popular Python libraries and frameworks for specific tasks such as NumPy for numerical computations, Pandas for data manipulation, Matplotlib for data visualization, SQL full Module.

Module 3 : Advanced

6 Month

Artificial Intelligence and Machine Learning

Cybersecurity

Data Science and Analytics

Cloud Computing and DevOps

Blockchain and Distributed Ledger Technology

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Job Ready

Course Module: Personality Development

Module 1: Understanding Personality

1. Introduction to Personality Development

- o Self-awareness

Module 2: Building Self-confidence

1. Confidence Building Techniques

- o Body Language and Non-verbal Communication

Module 3: Communication Skills

1. Effective Communication

- o Public Speaking

Module 4: Interpersonal Skills

1. Building Relationships

- o Teamwork and Collaboration

Module 5: Personal Grooming and Etiquette

1. Personal Grooming

- o Professional Etiquette

Course Module: Aptitude and Reasoning

Module 1: Introduction to Aptitude and Reasoning

1. Overview of Aptitude Tests

- o Basic Mathematical Skills

Module 2: Quantitative Aptitude

1. Number Series and Sequences

- o Percentages, Ratios, and Proportions

- o Time, Speed, and Distance

Module 3: Logical Reasoning

1. Analogies and Classification

- o Syllogisms and Deductive Reasoning

- o Puzzles and Seating Arrangements

Module 4: Verbal Reasoning

1. Critical Reasoning

- o Reading Comprehension

Course Module: Resume Making

Module 1: Introduction to Resumes

1. Purpose of a Resume

- o Understanding Job Descriptions

- o Analyzing job requirements, Tailoring your resume

Module 2: Resume Structure and Content

1. Contact Information and Summary

- o Work Experience and Education

- o Showcasing relevant skills, Including certifications

Module 3: Formatting and Design

1. Formatting Tips

- o Choosing fonts and layouts, Using white space effectively

- o Resume Templates

- o Selecting appropriate templates

Module 4: Final Touches and Review

1. Proofreading and Editing

- o Common mistakes to avoid, Getting feedback

1. Cover Letters

- o Writing effective cover letters, Linking cover letters to resumes

Course Module: Office Skills

Module 1: Introduction to Office Skills

1. Overview of Office Skills

- o Importance in the workplace, Key competencies

Module 2: Microsoft Office Suite

1. Microsoft Word

- o Document creation and formatting, Advanced features (mail merge, templates)

- o Microsoft Excel

- o Microsoft PowerPoint

- o Microsoft Outlook

- o Email management, Calendar and task features

Module 3: Time Management and Productivity

1. Time Management Techniques

- o Productivity Tools

- o Using office productivity tools, Techniques to stay focused

Module 4: Professional Communication

1. Written Communication

- o Verbal Communication

- o Effective meetings, Telephone etiquette

Module 5: Office Ethics and Etiquette

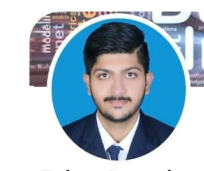
1. Professional Conduct

- o Teamwork and Collaboration

- o Working in teams, Building professional relationships



Naveen Katkam
Lead Engineer at GE Power



Eshan Inamdar
Consultant | Data Analytics
EXL Panvel, Maharashtra, India



Rahul Wadhai
Experienced Automotive
Tata Elxsi



Shubham saraf
Automation Engineer at
Nimbus Automation Solution Pvt Ltd.

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C , C++, Python

C Programming

Module 1 :

Introduction to C Programming & Language Syntax, Setting Up the Development environment (Compiler, IDE) Variable & Data Type, Input & Output, operators & Expressions, Control Flow & Decision Making, Conditional Statement (if, if-else, switch), Looping Structure (for, while, do-while), Break & Continue Statement, Arrays, Introduction to arrays, 1D and 2D arrays, Array indexing and traversal, Array initialization and manipulation.

Module 2 :

Functions, Introduction to functions, Function declaration and definition, Return values and void functions, Function prototypes and header files, Pointers, Pointer declaration and initialization, Pointer arithmetic, Pointers and arrays, Pointers & functions, Strings, Structure & Unions, Dynamic Memory Allocation, File Handling.

C++ Programming

Module 1 :

Introduction to C++, Compilers and IDEs, Basic Syntax and Rules, Variables, Data Types & Operators, Basic Data Type, Modifiers, Constants and variables, Arithmetic, relational, logical, and assignment operators, Console input/output (cout, cin), Control Flow, Decision Making, Switch Statement, Looping, break Statement, Function Declaration & Definition Object.

Module 2 :

OOPs, Classes & Objects, Encapsulation, Abstraction, Inheritance, and Polymorphism, Constructors and Destructors, Constructors & Destructors, Operator Overloading, Inheritance, Polymorphism, Abstract Classes & Interfaces, Templates (Function & Class Templates,), Exception Handling, File Handling.

Python Programming

Month 1:

Python Fundamentals, Introduction to Python & its Features, Variables, Data Types & Type Conversion, Operators & Expressions, Control Flow & Decision Making, Looping Structures, Functions, I/p & O/p Operation, Exception Handling, Data Structures, Lists, Tuples & Sets, Dictionaries & their Operation.

Month 2 :

Strings & String Manipulation, Lists Comprehensions, File Handling, Error handling, & Exceptions, OOPs Concept, Classes, Object & Instances, Class Attributes & methods, Inheritance & Polymorphism, Encapsulation & data hiding, Overloading and overriding, Abstract Classes & Interfaces.

Feature :

Practical Application

Active Learning

Project-Based Learning

Coding Exercises and Challenges

Debugging and Problem-Solving Skills

Collaboration and Teamwork

Immediate Feedback

Real-World Code Examples

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Technical Kurukshetra

Master in Electrical & Automation

Module 1 : Beginner

6 Month

Basic of electricity, All about components , Semiconductors, Analog Electronics Phasors and Complex Impedance, Frequency Response, AC Power and Power Factor, Op-Amps, Amplifier Configurations (Inverting, Non-inverting, Differential), Transistor Amplifiers, Common Emitter, Common Base, and Common Collector Configurations, Numbers systems, Digital Electronics, Binary logic developments, IC Technologies , TTL, CMOS, ECL, BiCMOS, GaAs, ASIC, FPGA, MEMS, SoC ,Power ICs, Circuit designing techniques, IC integrated Circuits, SMD components basic Live consumer based project

Module 2 : Intermediate

6 Month

Basic of coding, C programming, C++, Data structure, Arc of Microcontroller vs Microprocess, theory of interfacing devices, all interfacing with Arduino, 8051 with ASM and interrupts, timers, counters, serial, I2C, basic of AVR, PIC, programming with all device, STM32, ESP8266, ESP32, Internet of things, basic structure of IoT, making weather monitoring system, agricultural data monitoring, thing speaks, web based application, Fundamentals of PLC, Basic of PLC, PLC History, PLC Architecture, & Block Diagram, PLC Application, PLC Hardware Components, Types of I/P & O/P, Input Selection, Discrete I/O Modules, Analog I/O Module, Special I/O Module, Specification of Digital & Analog I/P & O/P Module, Ladder Diagram, Instruction List, FBD, Fundamental Logics, Equivalent Relay Logic for Ladder Diagram, Sequencing, Interlocking & Latching principles, Standard Procedure for writing a Ladder Diagram, Basic & advance PLC Instruction, Timer & Counters Programming, Real PLC Interfacing with Devices & Model.

Module 3 : Advanced

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Master in Computers

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Specialization

Artificial Intelligence and Machine Learning

Cybersecurity

Data Science and Analytics

Cloud Computing and DevOps

Blockchain and Distributed Ledger Technology

Our Alumni



Shubham saraf
Automation Engineer at
Nimbus Automation Solution
Pvt Ltd.



Mohsin Shaikh
Industrial Automation
Professional



Milind Kotwal
Automotive Embedded
Marquardt India Pvt. Ltd



Eshan Inamdar
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Technical Kurukshetra

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Master in Computers

Module 1 : Beginner

6 Month

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Module 2 : Intermediate

6 Month

Introduction to Object-Oriented Programming, Classes and Objects, Constructors and Destructors, Inheritance and Polymorphism, Encapsulation, Function Overloading, Operator Overloading, Templates, Exception Handling, File Handling, Python, including variables, data types, operators, control flow statements (if-else, loops), and functions. Data Types: Working with different data types such as integers, floats, strings, lists, tuples, dictionaries, and sets. Functions: Defining and calling functions, passing arguments, returning values, and understanding scope and local/global variables. File Handling: Reading from and writing to files, Modules and Packages: Importing and using modules and packages to extend the functionality of Python, organizing code into reusable modules. Libraries and Frameworks: Exploring popular Python libraries and frameworks for specific tasks such as NumPy for numerical computations, Pandas for data manipulation, Matplotlib for data visualization, SQL full Module.

Module 3 : Advanced

6 Month

- 1] Full stack development
- 2] Cloud Computing
- 3] AI and ML
- 4] Cybersecurity

Arduino, 8051, RPi

Arduino

Module 1 : Introduction to Embedded System, Fundamentals of controller, Study of Arduino Hardware, Introduction to Arduino Uno Board, What is Arduino, About Open Source Platform, Introduction of C (operators, constants, variable, & data type, std i/p & o/p function, decision making, looping, switch, function), Intro to Embedded C, Difference between C & Embedded System.

Module 2 : IDE, Cross Compiler, Arduino Sketch, Program Burning & Execution, Interfacing of LED, Interfacing circuit description of LED, Introduction (theory) to Motors, Programming & Controlling of Motors, Introduction to 16*2 LCD, Introduction to LCD, Interfacing Circuit Description of 16*2 LCD, Interfacing of Switches & Keyboard Matrix, Controlling LED by using Switches, Interfacing of Sensors, Serial Communication Programming.

8051

Module 1 : Introduction to Embedded System, Basics of Electronics, Voltage, Current, Voltage, Resistor, Circuit Designing, PCB Designing, PCB Printing & Etching, Microprocessor & Microcontroller Introduction of C (operator, constant, variable & data type, std i/p & o/p function, decision making, looping, switch, function), Introduction to Embedded C, Difference between C & Embedded C.

Module 2 : Software tools, Cross Compilers, Introduction to Keil IDE, Flash Magic, Interfacing of LED, Introduction (theory) to Motors, Interfacing of Motors, Programming & Controlling Motors, Intro to 7 Segment, Interfacing of 7 segment Display, Types of 7 Segment Display, Introduction to 16*2 LCD, Interfacing of LCD, Interfacing of Switches & Keypad Matrix, Controlling of LED by using Switches.

Raspberry Pi

Module 1 : Introduction to Embedded System, Fundamentals of Microcontroller, Introduction to ARM Processors, Features of ARM9 & ARM11, ARM9 & ARM11 Internal Modules, Registers & Memory of ARM, Introduction to Raspberry Pi, Power Supply Unit, Preparation of Boot SDCARD, raspberry Pi Features, Configuration of Raspberry Pi, programming C on Pi, Operators, Constant ,Variable & Data Types, Decision Making, Looping, Switch, Function

Module 2 : programming C on Pi, Operators, Constant ,Variable & Data Types, Decision Making, Looping, Switch, Function, Programming Python on Pi, Python Basics, Input, Variables & Loops , Python Program Structure, Functions, Error & Exception, Programming with Raspberry Pi, Raspberry Pi GPIO, Reading Data from GPIO, Hardware Configuration, Developing Application.

Feature :

Practical Application

Active Learning

Project-Based Learning

Coding Exercises and Challenges

Debugging and Problem-Solving Skills

Collaboration and Teamwork

Immediate Feedback

Real-World Code Examples

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Robotics, IoT, Data science

Robotics

Module 1 :

Basic concepts of voltage, current, and resistance, Introduction to electronic components: resistors, capacitors, PCB Drilling Etching & Soldering, Sensor (ultrasonic, Introduction to Robotics (Mechanics, Motion, Force, Velocity, Gear), Introduction to Arduino Uno Board, What is Arduino, About Open Source Platform, Introduction of C (operators, constants, variable, & data type, std i/p & o/p function, decision making, looping, switch, function),

Module 2 :

Line Follower Robot, Obstacle Avoidance Robot: Construct a robot that can detect and avoid obstacles in its path using ultrasonic sensors. Bluetooth Controlled Robot: Create a robot that can be wirelessly controlled using a smartphone Robotic Arm: Build a robotic arm using servo motors and control it with the Gesture Controlled Robot: Create a robot that can be controlled through hand gestures. Light-Seeking Robot: Build a robot that can detect and move towards a light source. Sumo Robot: Construct a Sumo robot for competition or friendly matches. Voice Controlled Robot: Build a robot that responds to voice commands.

IoT [Internet of Things]

Module 1 :

IDE, Cross Compiler, Interfacing of LED, Motors, Programming & Controlling of Motors, Introduction to 16*2 LCD, Introduction to LCD, Interfacing Circuit Description of 16*2 LCD, Interfacing of Switches & Keyboard Matrix, Controlling LED by using Switches, Interfacing of Sensors, Serial Communication Programming.

Module 2 :

Introduction to common sensors used in IoT projects (temperature, humidity, motion, light, etc.) Interfacing sensors with Arduino and ESP microcontrollers Reading sensor data and transmitting it to the cloud using MQTT or HTTP protocols Data acquisition and storage techniques (SD card, EEPROM, cloud-based platforms) Overview of wireless communication protocols (Wi-Fi, Bluetooth, LoRa, Zigbee)

Interfacing ESP8266 or ESP32 with Arduino for Wi-Fi connectivity Establishing local and cloud-based communication with IoT platforms (Blynk, Thingspeak, Adafruit IO) Creating MQTT-based publish-subscribe architectures for device-to-device communication

Data science

Module 1 :

Introduction and Importance of Data Science, Statistics Descriptive Statistics, Probability Theory, Statistical Inference, Regression Analysis, Python or R. Familiarity with libraries and frameworks like NumPy, Pandas, scikit-learn, and TensorFlow. Data Manipulation and Analysis: Ability to acquire, clean, preprocess, and analyze large datasets using various techniques and tools. Skills in SQL for database querying and data extraction. Information Visualizations

Module 2 :

Data Mining, Data Structures, and Data Manipulation Algorithms used in Machine Learning, Machine Learning: Experience with machine learning algorithms, both supervised and unsupervised, for tasks such as classification, regression, clustering, and recommendation systems. Knowledge of model evaluation and optimization techniques. Data Scientist Roles and Responsibilities Data Acquisition and Data Science Life Cycle Deploying Recommender Systems on Real-World Data Sets Experimentation, Evaluation and Project Deployment Tools

Feature :

Practical Application

Active Learning, Project-Based Learning

Coding Exercises and Challenges

Debugging and Problem-Solving Skills

Collaboration and Teamwork

Immediate Feedback

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Industrial Trainings

Short Term Internship in PLC

Month 1 :

Continuity Testing of PLC Panel Wiring, Live AC Voltage Testing using DMM, Live AC Current Testing by Clamp Meter, DC Voltage Testing, Dc Current Testing, Electronics Component Testing in Panel & power Supply, Relay Testing & Practices, How Industry Work, Industrial Safety, PLC Panel Wiring & Ferule Identification, Digital I/O Connection with PLC, PLC Digital I/O Specialization, Source & Sink Type PLC Panel Wiring, Basic Ladder Diagram Development, Create Project on Software & Check it.

PLC Automation

Month 1 : Fundamentals of PLC, Basic of PLC, PLC History, PLC Architecture, & Block Diagram, PLC Application, PLC Hardware Components, Types of I/P & O/P, Input Selection, Discrete I/O Modules, Analog I/O Module, Special I/O Module, Specification of Digital & Analog I/P & O/P Module, Relay Basics & their Practices, SET, RET, Relay Type, Logical, Mathematical & Floating Point Instruction, Concept of Timer, TMR Instruction, ON/OFF delay Timer, Cyclic Timer, Counter Instruction, UP Counter, Down Counter, Cascading Counter, Control Relays, Contactors, Motor Starter, Manually & Mechanically Operated Switches, Push Button, Selector Switch, Limit Switch, Proximity Switch, Reed Switch.

Month 2 : Output Control Devices, AC Motor, Dc Motor, Solenoid Valve, Bulb, Diff Between Analog & Digital Signal, Type of Analog Signal, Vtg Type & Current Type Analog Signal, Introduction to PLC Programming Language, Ladder Diagram, Instruction List, FBD, Fundamental Logics, Equivalent Relay Logic for Ladder Diagram, Sequencing, Interlocking & Latching principles, Standard Procedure for writing a Ladder Diagram, Basic & advance PLC Instruction, Timer & Counters Programming, Real PLC Interfacing with Devices & Model.

PLC Programming

Month 1 : Introduction to PLC Programming Language, Ladder Diagram, Instruction List, FBD, Fundamental Logics, Equivalent Relay Logic for Ladder Diagram, Sequencing, Interlocking & Latching principles, Standard Procedure for writing a Ladder Diagram, Basic & advance PLC Instruction, Timer & Counters Programming, Real PLC Interfacing with Devices & Model.

Basic Electronics

Month 1 : Voltage, Current, Resistor, Diode, Capacitor, Transformer, Breadboard, Components and their theory, ICs, Analog Module (Differentiator, Integrator, Comparator Op-Amp, Voltage Regulator, Analog-to-Digital Converter (ADC), Digital-to-Analog Converter (DAC)), Digital Module (Logic Gates : NOT, AND, OR, their ICs, Flip-Flop, Counters, Shift Register, PCB drilling, Etching, Soldering, Basic Circuit Design : Power Supply, PCB Designing, Construction of Mini Project on Copper Clad.

Feature :

Practical Learning,

Hardware Interfacing

Project-Based Learning,

Sensor Integration,

Circuit Design and Prototyping,

Programming Microcontrollers

Actuator Control,

System Integration and Debugging

Troubleshooting and Debugging Skills,

Practical Application of Knowledge

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