CREDO SYSTEMZ
Simplifying IT

START YOUR FULL STACK DEVELOPER CAREER TODAY!!

CREDO SYSTEMZ

AI POWERED FULL STACK DEVELOPER COURSE

India's 1st AI-Driven IT Training – Credo Systemz

Capstone Projects :

Real Time Full Stack Developer Training Projects. Build the frontend and backend, add smart features using AI, and solve practical problems with your solution.

Food Delivery App

Building an application to browse restaurants, order food, and track deliveries in real-time.

Twitter/Instagram Clone

Developing a social media platform to post content, follow others, with likes and comments.

Chat Application

Building a real-time chat app in which users can message each other in one-on-one or group chats.

Event Booking App

You can see events and book tickets online. It sends email confirmation after booking.

Learning Management System (LMS)

People can search and apply for jobs. Companies can post job openings.

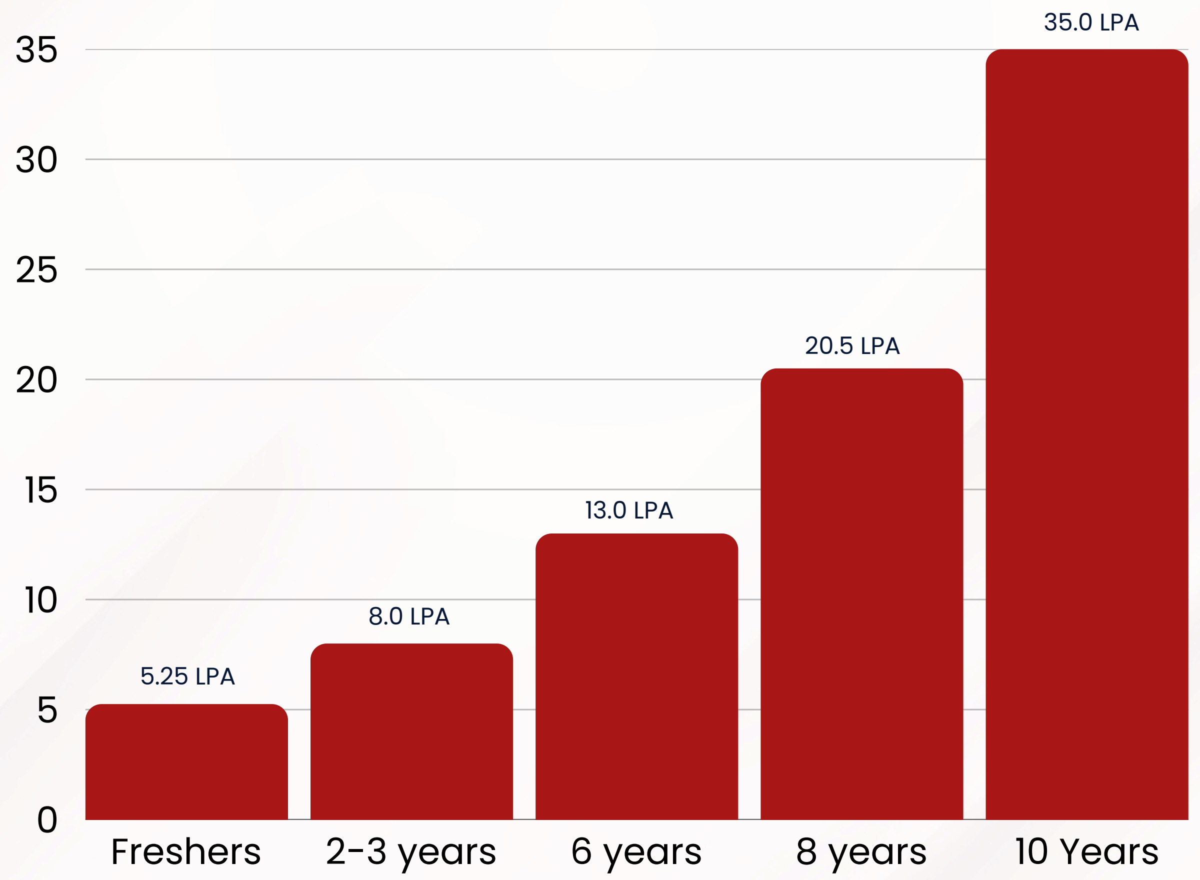
Learning App

Users can order food online from restaurants. It shows live order updates and payment options.

Full Stack

Opportunities & Demand

- **Lead Full Stack Engineer**
- **Full Stack Architect**
- **Technical Lead (Full Stack)**
- **Full Stack DevOps Engineer**
- **Cloud Full Stack Developer**
- **Full Stack AI Developer**



FULL STACK WITH AI COURSE SYLLABUS

REACT JS + JAVA SPRING

Duration : 100 hrs

Phase 1 – AI Introduction

Section 1 : Full Stack with AI

Introduction

- What is Artificial Intelligence(AI)?
- Introduction to Artificial Intelligence
- Evolution of AI in the software industry.
- Key differences between AI, ML, and automation.
- How AI understands prompts and generates outputs in development.

How Developers Use AI Tools Today

- Real-time code suggestions and auto-completion.
- Debugging and resolving errors.
- Auto-generating documentation and test cases.
- Enhancing productivity in frontend and backend development.
- Learning new technologies via AI-powered explanations.

Overview of AI Tools (Copilot, ChatGPT, Codeium, Tabnine)

- GitHub Copilot – Code completion and generation inside VS Code.
- ChatGPT – Conversational AI for explaining concepts, solving bugs, and writing logic.
- Codeium – Lightweight open-source AI assistant for developers.
- Tabnine – Predictive code suggestions for multiple languages and editors.
- Amazon CodeWhisperer – AI coding tool optimized for cloud and AWS-based applications.
- Feature comparison and use cases.

Installing GitHub Copilot in VS Code

- Prerequisites: GitHub account, VS Code setup.

- Installation steps: Search, install, and activate the Copilot extension.
- Verifying Copilot functionality within the editor.

Activating Copilot with GitHub Account

- Connecting VS Code with GitHub credentials.
- Subscription setup (Free/Trial/Pro plans).
- Enabling Copilot across projects and environments.

Phase 2 – Frontend Development

Section 2 : HTML 5

- Introduction - Web
- What are the different Types of Web Apps overview?
- Introduction to HTML
- Define HTML Structure
- Difference between Tag vs Element
- Difference between Semantic vs Non-semantic elements
- Difference between Block level elements vs Inline elements
- HTML Elements
- HTML Forms & its Attributes
- HTML Input Elements
- HTML Global Attributes
- HTML Element Specific Attributes

AI in Action:

- Use ChatGPT to explain HTML tags, forms, and semantic elements.
- Generate HTML templates using GitHub Copilot or Codeium from simple prompts like "Create a contact form."
- Auto-suggest attributes and fix structure issues using AI linters or extensions in VS Code.

Section 3 : CSS & Bootstrap

- What is CSS?
- Understanding the CSS Syntax.
- CSS Selectors
- How To Add CSS in HTML

- CSS Colors & Backgrounds
- CSS Borders, Margins, Padding, Height and Width
- Responsive Web Design – Media queries
- What is Bootstrap?
- Get Start with Bootstrap
- Containers
- Grid System
- Structure of a Bootstrap Grid
- Bootstrap Colors
- Bootstrap Tables
- Bootstrap Jumbotron
- Bootstrap Alerts, Buttons

AI in Action:

- Use Copilot to autocomplete style rules and responsive media queries.
- Generate custom CSS frameworks using AI prompt tools like Tabnine.
- Ask ChatGPT to refactor or explain complex CSS rules and layout bugs.
- Build Bootstrap grids or buttons by typing “Create 3-column responsive layout using Bootstrap.”

Section 4: JavaScript

- Introduction – Javascript
- JavaScript Events
- JavaScript Functions
- Inbuilt methods in JS
- Arrays in JavaScript
- Objects in JavaScript
- Conditional and loops in JavaScript
- HTML DOM Manipulation

Section 5: ES6 JavaScript

- History of JavaScript
- Features
- let & const and its example
- Arrow Functions
- Alternative
- Tips and Arrow Functions

- Exports and Imports
- Tips for exports and imports
- Classes
- Classes example
- Inheritance
- Spread and rest Parameter
- Destructing

AI in Action:

- Copilot can complete functions or suggest better loop structures.
- Use ChatGPT to explain callback vs promise vs async/await in your own words.
- Auto-generate ES6 classes, arrow functions,
- Destructuring examples using natural language.
- Debug JavaScript errors via ChatGpt Prompts
- Debug Logic mistakes via ChatGPT prompts.

Section 6: Getting Started with React

- What is ReactJS?
- Installation or Setup
- Create React App
- Advantages Of React JS
- Workflow Of React JS
- Node Setup
- How to use NPM and its purpose
- ES6 Introduction
- JS vs JSX vs TS vs TSX

Section 7: Components

- Creating Components
- Basic Component
- Nesting Components
- Higher order components

Section 8: OVERVIEW OF JSX

- Introduction of Virtual DOM.

- Introduction of Virtual DOM.
- Difference between JS and JSX.
- Why use JSX?
- JSX Attributes
- JSX Styling

Section 9: Props in React

- Introduction
- Default props
- PropTypes
- Passing down props using spread operator
- Props.children and component composition
- Detecting the type of Children components
- Props Drilling

Section 10: State in React

- Basic State
- Common Antipattern
- setState()
- State, Events And Managed Controls

Section 11: React Component Lifecycle

- Component willmount
- Component UnMount
- Component Update
- Lifecycle method call in different states
- React Component Container

Section 12: Handling Events

- Event handling in React
- Binding event handlers
- Arrow functions vs. regular functions
- Primary Events
- Sharing the events between components

Section 13: Communicate Between Components

- Child to Parent Components
- Parent to Child Components
- Not-related Components

Section 14: Conditional Rendering

- Conditional rendering with if statements
- Conditional Rendering using logical &amp;&amp; in JSX
- Conditional Rendering using ternary operator
- Preventing Component from Rendering

Section 15: Lists and Keys

- Steps to Create and Traverse React JS Lists
- Rendering lists inside Components
- Key in React List

Section 16: React JS Keys

- What is a key in React ?
- Assigning keys to the list
- Difference between keys and props in React

Section 17: React Hooks

- useState()
- useEffect()
- useContext()
- useRef()
- useReducer()
- Custom React Hooks
- useDispatch(), useSelector, useMemo, useLayoutEffect()

Section 18: React Hooks

- useEffect()

- useEffect()
- useContext()
- useRef()
- useReducer()
- Custom React Hooks
- useDispatch(), useSelector, useMemo, useLayoutEffect()

Section 19: Styling in React

- CSS in React
- Different approaches for styling (CSS, CSS-in-JS, CSS Modules)
- Inline styles
- Styling Libraries
- Popular CSS frameworks (e.g., Bootstrap, Material-UI)

Section 20: Router

- Introduction to React Router
- Setting up React Router
- Creating routes
- Navigating with React Router
- Using Link and NavLink
- Nested Routes and Dynamic Routing
- Nested routes
- Passing parameters to routes
- Query String, accesing current URL

Section 21: React JS forms

- React Forms
- Lists of Form components
- Control Input elements.
- Controlled and Uncontrolled form components
- Adding Forms in React
- Handling React Forms
- Submitting React Forms
- Multiple Input Fields
- React JS Form validations
- Custom Validations

Section 22: State Management with Redux

- Introduction to Redux
- Understanding the need for state management
- Basic concepts: actions, reducers, store
- Setting Up Redux
- Installing Redux and setting up a store
- Creating actions and reducers
- Connecting React with Redux
- Using connect to connect components to the store
- Dispatching actions

Section 23: Asynchronous Programming and API Integration

- AJAX and Fetch API
- Making HTTP requests in React
- Fetching data from an API
- Async/Await and Promises

Section 24: Handling errors in React application

- Error Handling and Debugging
- Debugging React apps
- Performance Optimization
- Memoization
- React.memo and PureComponent

Section 25: React JS Virtual DOM

- What is DOM ?
- Disadvantages of real DOM
- Virtual DOM
- How does virtual DOM actually make things faster?
- How virtual DOM Helps React?
- Virtual DOM Key Concepts
- Differences between Virtual DOM and Real DOM

Section 26: Unit Testing Overview

Section 27: Lazy Loading

Section 28: Code Spliting

Section 29: Server-Side Rendering

Section 30: Micro FrontEnd Overview

Section 31: Deploying a React application

Section 32: React JS – With AI Integration

Use Copilot to

- Scaffold React components with useState, useEffect, or useReducer
- Write router configs, validation logic, and Redux action templates

ChatGPT:

- Explain prop drilling or React context
- Help fix state update bugs
- Create optimized component hierarchies
- Generate form validation rules, lifecycles, hooks using AI prompts.
- Use Codeium or Tabnine to auto-suggest JSX templates and inline styles.

Phase 3 – Backend Development

Section 33: Introduction - Java

- Introduction about Programming Language Paradigms
- Why Java?
- Flavors of Java.
- Java Designing Goal.
- Difference between JDK,JRE and JVM
- JVM –The heart of Java .
- Java Architecture
- Java’s Magic Bytecode.

Section 34: Programming Fundamentals

- Data types
- Difference between Primitive & Non Primitive Datatypes
- Variable Declaration & Initialization
- Type Casting
- Operators and its types

Section 35: Control Structure and Looping Statements

- IF conditions
- IF-ELSE conditions
- ELSE-IF Ladder conditions
- SWITCH-CASE statements
- “FOR” Loop
- “WHILE” Loop
- “DO-WHILE” Loop
- ENHANCED “FOR” Loop

Section 36: OOPS INTRODUCTION AND BASICS

- What is OOPS?
- Necessity and Advantage of OOPS
- OOPS Designs with real-time examples.
- What is mean by class and object?
- Relation between a Class and an Object
- How to create class and object

Section 37: OOPS BASICS (CLASSES & OBJECTS)

- Components of a Class
- Types of Variables and its uses.
- Constructor advantages and its types
- Ways to initialize the Object
- “this” keyword
- Static Block & Instance Block

Section 38: OOPS CONCEPTS - INHERITANCE

- Inheritance and its advantages
- The “extends” keyword
- Types of Inheritance
- Single Inheritance
- Use of “super” keyword and forms of “super” keyword

Section 39: OOPS CONCEPTS – ENCAPSULATION ALONG WITH PACKAGES

- What is package and its advantages
- Types of packages
- Static Import
- Access Modifiers
- Encapsulation

Section 40: ARRAYS AND STRINGS

- What is Array and its advantages
- Types of Array
- Jagged Array
- String, String Buffer, String Builder

Section 41: EXCEPTION HANDLING

- What is Exception and its types
- How to handle exception?
- Multiple catch blocks
- Finally block
- Difference between throw and throws
- Custom Exception

Phase 4 – Database Development

Section 42: DATABASE

- What is Database?
- What is MySQL?

- Parts of MySQL
- Operators and Clauses in MYSQL.
- Functions and procedures in MYSQL.

Section 43: JDBC

- What is JDBC?
- Types of Drivers
- Loading the drivers
- Connection, Statement, PreparedStatement,
- CallableStatement,
- ResultSet Interfaces
- Batch Updates

Section 44: UTIL PACKAGE – COLLECTIONS FRAMEWORK

- The "Collection" Interface
- List, Set and Map Interfaces
- Cursors in java and its differences
- Difference between the implementation classes of List, Set and Map

Section 45: GENERICS IN COLLECTIONS FRAMEWORK

- Generics in Java
- Types of Generics
- Uses and Limitations of Generics
- Custom objects with Generic collections
- Sorting in Collections

Section 46: SPRING BOOT ARCHITECTURE

- Spring Boot Framework definition
- Spring Boot Framework design principals
- Spring Boot interfaces
- Bean Factory
- Application Context
- Factory methods

Section 47: INVERSION OF CONTROL

- Dependency Injection advantages
- Setter Injection
- Constructor Injection
- Bean Life Cycle
- Inner Beans
- References to other beans
- Scopes in Spring

Section 48: AUTOWIRING & SPRING BOOT MISCELLANEOUS

- Autowiring advantages and modes
- Spring Boot with Collections
- Reading values from Properties file
- Expression Language in Spring Boot
- Events Handling in Spring Boot

Section 49: AOP

- Spring Boot AOP Advantages
- AOP Configuration
- AOP Terms
- AOP Types of Advices

Section 50: SPRING BOOT JDBC

- JDBC Templates
- Row Mapper
- BeanProperty Row Mapper
- Bean Row Mapper
- Resultset Extractor

Section 51: SPRING BOOT ORM

- Database access layer for object, relational databases
- Spring Boot Framework Benefits with hibernate

- Spring Boot with Hibernate configuration files
- SpringData JPA
- Crud Repository and JPA Repository

Section 52: SPRING WEB MVC AND SPRING BOOT

- MVC Architecture in Spring
- About Dispatcher Servlet
- Types of Handler Mappings
- Types of Controller
- Types of View Resolver
- Spring MVC Annotations
- Spring MVC with CRUD operations
- Spring with Web Services
- Spring Boot Application
- Difference between Spring and Spring Boot
- Spring Boot Annotation

Section 53: SPRING BOOT – OVERVIEW

- What is Spring Boot?
- Developing a Project with Spring Boot Initializer
- Developing a REST API Controller with Spring Boot
- Examining the Spring Boot Project Structure - Part 1
- Examining the Spring Boot Project Structure - Part 2
- Spring Boot Starters - A Curated List of Dependencies
- Parents for Spring Boot Starters

Section 54: SPRING BOOT DEV TOOLS AND SPRING BOOT ACTUATOR

- Spring Boot Dev Tools - Overview
- Spring Boot Actuator - Overview
- Spring Boot Actuator - Accessing Actuator Endpoints
- Spring Boot Actuator - Applying Security to Actuator Endpoints

Section 55: SPRING BOOT - RUNNING SPRING BOOT APPS FROM THE

- Running Spring Boot Apps from the Command Line - Overview
- Running Spring Boot Apps from the Command Line - Coding

Section 56: SPRING BOOT - APPLICATION PROPERTIES

- Running Spring Boot Apps from the Command Line - Overview
- Running Spring Boot Apps from the Command Line - Coding

Section 57: SPRING BOOT - APPLICATION PROPERTIES

- Injecting Custom Application Properties
- Configuring the Spring Boot Server

Section 58: Real Time Projects

- 5+ Real-time projects (Full stack coverage)
- Setup Git for local repository
- Create a GitHub account
- Sync the code base with GitHub repo
- Firebase Hosting Overview
- Setting up Firebase in local
- Host your project in Firebase

Section 59: Java Spring – With AI Integration

Use Copilot:

- Create controllers, services, and repositories faster
- Add annotations like @RestController, @Service, @Autowired
- Write REST API methods
- Set up application settings quickly
- Build CRUD operations with less typing

ChatGPT:

- Dependency injection and beans
- fix common errors and bugs

- Guide you in creating REST APIs
- Show examples of request and response handling

Use Codeium or Tabnine:

- Suggest service methods and repository code
- Complete JPA query method names
- Fill in config files like application.properties
- Help write test cases
- Speed up writing helper and error-handling code

Section 60: Placements

- Build your Professional Resume
- Update LinkedIn Profile
- Interview-based Training – GD, Tech round, HR panel
- Minimum 5 Mock interviews before Real interview
- 100% Placement Guaranteed
- Join your Dream Job

SKILLS AND TOOLS

Skills Covered

HTML

CSS

Java

Javascript

My SQL

Oracle

Bootstrap

Spring Boot

Node JS

Database

React

Tools Covered

VS Code

Spring Tool Suite

Server

Postman

Intelj

Git

Eclipse

Command Line

PLACEMENT SUCCESS STORIES

	Designation	Company	Package
Rajiv	Full Stack Developer	SIMSON Softwares	7.8 LPA
YogaLakshmi	Front End Developer	ECS Cloud Infotech	8.5 LPA
Madhumathi	Software Developer	COLAN INFOTECH	7.8 LPA
Suja	Cloud Engineer	Beelogical The Magic of Logic	8.6 LPA
Sanakarapandiyan	Full Stack Developer	Shellinfo Global	8.0 LPA
Asai Thambi	Full Stack Developer	SUNSMART	11.0 LPA

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impress | VAYUZ | COLAN INFOTECH

Beelogical The Magic of Logic | COGMED | ALTOS Technologies

Earn your Full Stack Course Completion Certificate

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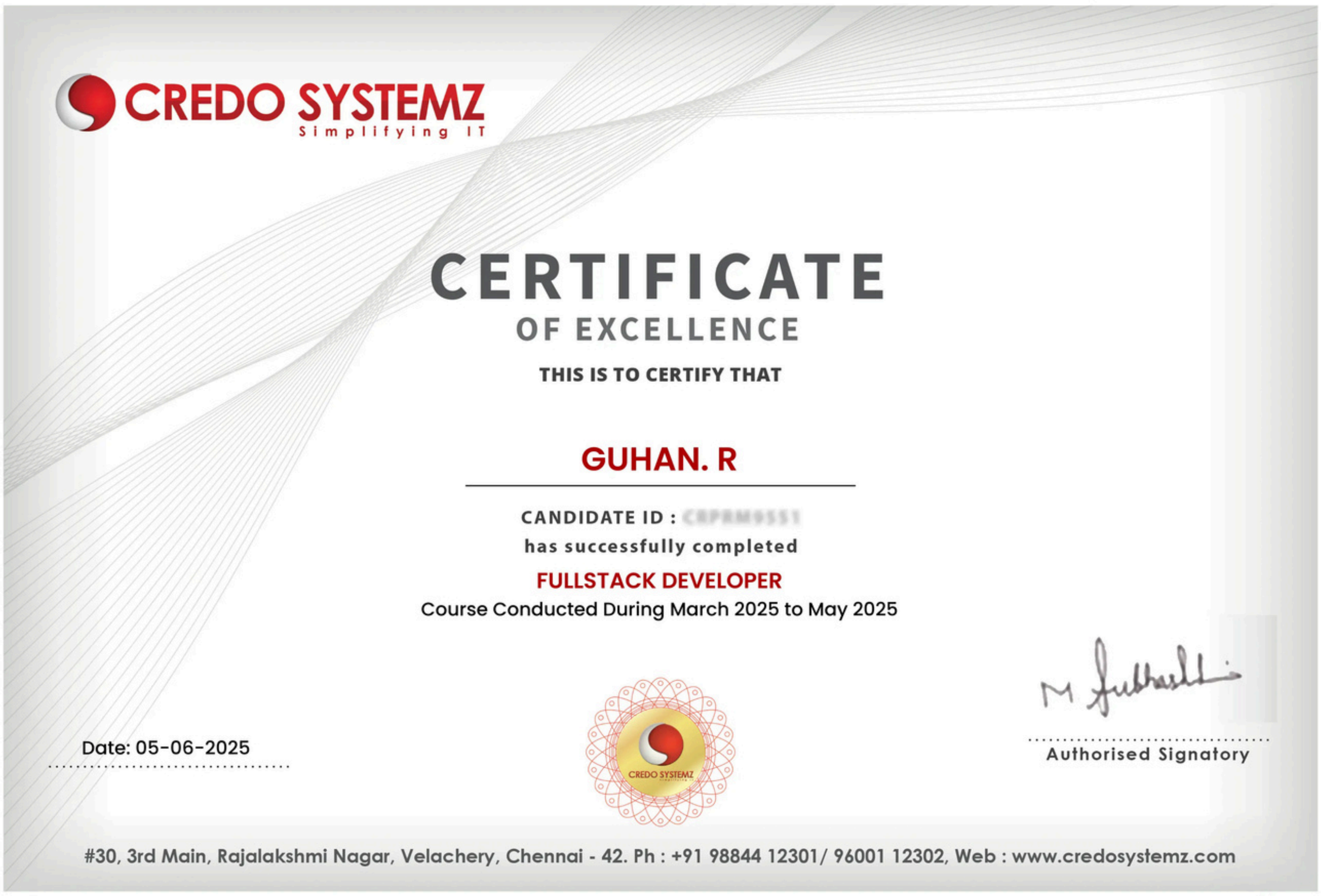

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CERTIFICATE
OF EXCELLENCE

THIS IS TO CERTIFY THAT

GUHAN. R

CANDIDATE ID : [redacted]

has successfully completed

FULLSTACK DEVELOPER

Course Conducted During March 2025 to May 2025

Date: 05-06-2025

CREDO SYSTEMZ

[illegible]

Authorised Signatory

#30, 3rd Main, Rajalakshmi Nagar, Velachery, Chennai - 42. Ph : +91 98844 12301/ 96001 12302, Web : www.credosystemz.com

WHAT OUR TRAINEE SAYS?

Libin Charan

4.7 ★★★★½

Credo Systemz's Full Stack course is very practical and job-oriented. The trainers explained every topic clearly with real-time examples. Placement support was strong. I got placed after training. Totally worth the investment!

Mukesh Babu

4.2 ★★★★½

The Full Stack training at Credo Systemz covered front-end and back-end thoroughly. Live projects helped a lot. Mentors were always helpful. Thanks to their placement team, I'm now working in an IT company.

Padmesh

5.0 ★★★★★

I joined Credo Systemz for Full Stack training and it was the best decision. Great trainer, hands-on projects, and mock interviews helped me switch to IT. Strongly recommend for career changers!

Vasmitha

4.9 ★★★★½

Credo Systemz Full Stack program gave me confidence to attend interviews. I learned MERN stack with real-time examples. The support from admin and placement team was great. Got placed right after course completion.

Jason Isreal

4.0 ★★★★

As a fresher, Credo Systemz's Full Stack course gave me all the knowledge I needed. The trainer's guidance and regular assessments helped me grow. I got placed within weeks of completing the course!

Subritha

4.5 ★★★★½

I had no coding background but the Full Stack course at Credo Systemz was easy to follow. Trainers were supportive and explained clearly. Placement team constantly followed up until I got placed. Thanks!

CHENNAI

VELACHERY

New # 30, Old # 16A, Third Main Road, Rajalakshmi Nagar, Velachery, (Opp. to Murugan Kalyana Mandapam), Chennai – 600 042.

+91 98844 12301

OMR

Plot No.8, Vinayaga Avenue, Rajiv Gandhi Salai, (OMR), Okkiampettai, (Behind Okkiyampet Bus Stop) Chennai – 600 097.

+91 96001 12302

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Houchin Drive, Franklin, TN -37064. Tennessee

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Sima Electronic Building, LLH Opposite, Electra Street – Abu Dhabi

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