



MONOPOLY
IT SOLUTIONS

6-MONTH AI-READY FULL STACK ENGINEER

(LANGUAGE AGNOSTIC)

Java

.NET

Python



AI POWERED



INDUSTRY READY



REAL-WORLD PROJECTS



PLACEMENT FOCUS



BUILD ONCE.
DEPLOY ANYWHERE.
WORK EVERYWHERE.

PHASE 1

SOFTWARE ENGINEERING FOUNDATION

WEEKS 1-4



- Programming Fundamentals
- OOPs Concepts
- Data Types, Variables, Operators
- Control Statements & Loops
- Functions & Recursion
- Arrays, Strings, Collections
- Exception Handling
- File Handling
- Multithreading Basics

Mini Project: Library Management System

PHASE 2

DATABASE ENGINEERING

WEEKS 5-6



- Database Engineering Basics
- ER Diagram & Data Modeling
- Normalization (1NF, 2NF, 3NF)
- SQL Fundamentals
- Joins, Subqueries, Views
- Stored Procedures
- Functions, Triggers
- Indexes & Performance
- Transactions & Concurrency
- Database Security

Mini Project: Student Management System

PHASE 3

FRONTEND ENGINEERING

WEEKS 7-10



- HTML5, CSS3, Bootstrap 5
- Responsive Web Design
- JavaScript Essentials (ES6+)
- DOM, BOM, Events
- TypeScript Fundamentals
- OOP in TypeScript
- Angular (or React) Essentials
- Components, Routing
- Forms, Services, Interceptors
- State Management

Project: Student Portal

PHASE 4

BACKEND ENGINEERING

WEEKS 11-14



- Backend Framework (.NET / Java / Python)
- Architecture & Project Structure
- REST APIs & Web Services
- Authentication & Authorization (JWT)
- CRUD Operations
- Validation & Exception Handling
- Logging & Global Exception Handling
- File Uploads & Email
- API Documentation (Swagger/OpenAPI)

Project: Employee Management API

PHASE 5

ENTERPRISE SOFTWARE ENGINEERING

WEEKS 15-17



- Clean Architecture & SOLID Principles
- Design Patterns
- Modular Monolith & DDD Basics
- Microservices Overview
- API Gateway
- Caching (Redis)
- Message Queues (RabbitMQ/Kafka)
- Scalability & Load Balancing

Project: Institute Management System

PHASE 6

DEVOPS ENGINEERING

WEEKS 18-20



- Git & GitHub / GitFlow
- Docker & Containerization
- Docker Compose
- CI/CD Pipelines
- Cloud Platforms (AWS / Azure)
- Infrastructure as Code (Basics)
- Monitoring & Logging
- Reverse Proxy (Nginx)

Project: Cloud Deployment

PHASE 7

AI ENGINEERING

WEEKS 21-22



- AI Tools for Developers
- Prompt Engineering
- ChatGPT / Claude / Gemini
- LLM APIs & Embeddings
- RAG (Retrieval Augmented Generation)
- Vector Databases (Pinecone/FAISS)
- AI Agents (Basics)
- Build AI-Powered Applications

Project: Enterprise AI Assistant

PHASE 8

ENTERPRISE PROJECT

WEEKS 23-24



- Project Planning & Requirement Analysis
- System Design & Architecture
- Full Stack Development
- Integration & Testing
- Deployment to Cloud
- Documentation & Presentation
- Performance & Security Review

Capstone: End-to-End Enterprise Application

TECHNOLOGY MAPPING (LANGUAGE AGNOSTIC)

LAYER	.NET STACK	JAVA STACK	PYTHON STACK
Programming Language	C#	Java	Python
Backend Framework	ASP.NET Core	Spring Boot	FastAPI
ORM	Entity Framework Core	Hibernate / JPA	SQLAlchemy
Database	SQL Server / MySQL	MySQL / PostgreSQL	PostgreSQL / MySQL
Authentication	ASP.NET Identity / JWT	Spring Security / JWT	JWT / OAuth2
API Documentation	Swagger / OpenAPI	OpenAPI / Swagger	FastAPI Docs / Swagger
Frontend	Angular	Angular / React	React / Vue / Angular
Testing	xUnit / NUnit	JUnit / TestNG	PyTest / unittest
Build Tool	.NET CLI	Maven / Gradle	Pip / Poetry
Containerization	Docker	Docker	Docker
Deployment	IIS / Docker / Azure	Tomcat / Docker / AWS	Uvicorn / Docker / Cloud

ENTERPRISE PROJECT EXAMPLES

HRMS

ERP System

CRM

Hospital Management

Inventory Management

Education ERP

AI Assistant

Finance Management

Build. Integrate. Deploy. Scale.
Real Projects. Real Impact.

WHY THIS CURRICULUM WORKS

LANGUAGE AGNOSTIC
Choose .NET, Java or Python – concepts remain the same.

DEVOPS READY
End-to-end DevOps for faster and reliable delivery.

AI INTEGRATED
AI tools, LLMs and agents built into the learning journey.

PLACEMENT FOCUS
Resume, LinkedIn, Mock Interviews & Soft Skills training.

INDUSTRY PROJECTS
Work on real-world projects used in modern enterprises.

MENTOR SUPPORT
Expert guidance and code reviews throughout the program.

SYSTEM DESIGN
Build scalable, secure and high-performance systems.

GITHUB PORTFOLIO
Build a strong portfolio to stand out in job interviews.



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IT SOLUTIONS
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