AI Agent Training

COURSE CONTENT

About Multisoft

Train yourself with the best and develop valuable in-demand skills with Multisoft Systems. A leading certification training provider, Multisoft collaborates with top technologies to bring world-class one-on-one and certification trainings. With the goal to empower professionals and business across the globe, we offer more than 1500 training courses, which are delivered by Multisoft's global subject matter experts. We offer tailored corporate training; project Based Training, comprehensive learning solution with lifetime e-learning access, after training support and globally recognized training certificates.

About Course

The AI Agent Training Course by Multisoft Systems is designed to equip professionals with the knowledge and skills needed to build and deploy intelligent agents that drive automation, enhance productivity, and support real-time decision-making. In today's fast-evolving digital landscape, AI agents are transforming industries by automating routine tasks, improving customer interactions, and optimizing workflows with minimal human intervention.

Module 1: Agentic AI Essentials

- ✓ Agentic AI Introduction
- ✓ AI Agents vs. Agentic AI
- ✓ Comparison: Agentic AI, Generative AI, and Traditional AI
- ✓ Agentic AI Building Blocks
- ✓ Autonomous Agents
- ✓ Human in the Loops Systems
- ✓ Single and Multi-Agent AI Systems
- ✓ Agentic AI Frameworks Overview
- ✓ Ethical and Responsible AI
- ✓ Agentic AI Best Practices
- ✓ AI Implementation Success Stories: Case Studies

Module 2: Agentic AI: Architectures and Design Patterns

- ✓ Agentic AI Architecture
- ✓ Agentic Architecture Types
- ✓ Key Components of the Agentic AI Framework
- ✓ Perception Module
- ✓ Cognitive Module
- ✓ Action Module
- ✓ Learning Module
- ✓ Collaboration Module
- ✓ Security Module
- ✓ Agentic AI Design Patterns
- ✓ Reflection Pattern
- ✓ Tool Use Pattern
- ✓ Planning Pattern
- ✓ ReAct (Reasoning and Acting) and ReWOO (Reasoning with Open Ontology)
- ✓ Multi Agent Pattern

✓ Design Considerations

Module 3: Working with LangChain and LCEL

✓ Components and Modules

✓ Data Ingestion and Document Loaders

✓ Text Splitting

✓ Embeddings

✓ Integration with Vector Databases

✓ Introduction to Langchain Expression Language (LCEL)

✓ Runnables

✓ Chains

✓ Building and Deploying with LCEL

✓ Deployment with Langserve

Module 4: Building AI Agents with LangGraph

✓ Introduction to LangGraph

✓ State and Memory

✓ State Schema

✓ State Reducer

✓ Multiple Schemas

✓ Trim and Filter Messages

✓ Memory and External Memory

✓ UX and Human-in-the-Loop (HITL)

✓ Building Agent with LangGraph

✓ Long Term Memory

✓ Short vs. Long Term Memory

✓ Memory Schema

✓ Deployment

Module 5: Implementing Agentic RAG

- ✓ What is Agentic RAG?
- ✓ Agentic RAG vs. Traditional RAG
- ✓ Agentic RAG Architecture and Components
- ✓ Understanding Adaptive RAG
- ✓ Variants of Agentic RAG
- ✓ Applications of Agentic RAG
- ✓ Agentic RAG with Llamaindex
- ✓ Agentic RAG with Cohere

Module 6: Developing AI Agents with Phidata

- ✓ Agents
- ✓ Models
- ✓ Tools
- ✓ Knowledge
- ✓ Chunking
- ✓ Vector DB
- ✓ Storage
- ✓ Embeddings
- ✓ Workflows
- ✓ Developing Agents with Phidata

Module 7: Multi Agent Systems with LangGraph and CrewAI

- ✓ Multi Agent Systems
- ✓ Multi Agent Workflows
- ✓ Collaborative Multi Agents
- ✓ Multi Agent Designs
- ✓ Multi Agent Workflow with LangGraph
- ✓ CrewAI Introduction

- ✓ CrewAI Components
- ✓ Setting up CrewAI environment
- ✓ Building Agents with CrewAI

Module 8: Advanced Agent Development with Autogen

- ✓ Autogen Introduction
- ✓ Salient Features
- ✓ Roles and Conversations
- ✓ Chat Terminations
- ✓ Human-in-the-Loop
- ✓ Code Executor
- ✓ Tool Use
- ✓ Conversation Patterns
- ✓ Developing Autogen-powered Agents
- ✓ Deployment and Monitoring

Module 9: AI Agent Observability and AgentOPs

- ✓ AI Agent Observability and AgentOPs
- ✓ Langfuse Dashboard
- ✓ Tracing
- ✓ Evaluation
- ✓ Managing Prompts
- ✓ Experimentation
- ✓ AI Observability with Langsmith
- ✓ Setting up Langsmith
- ✓ Managing Workflows with Langsmith
- ✓ AgentOps Practical Implementation

Module 10: Building AI Agents with No/Low- Code Tools

- ✓ Introduction to No-Code/Low-Code AI

- ✓ Benefits and Challenges of No-Code AI Development
- ✓ Key Components of No-Code AI Platforms
- ✓ Building AI Workflows Without Coding
- ✓ Designing AI Agents with Drag-and-Drop Interfaces
- ✓ Integrating No-Code AI with Existing Systems
- ✓ Customizing and Fine-Tuning AI Solutions
- ✓ Optimizing Performance and Efficiency in No-Code AI
- ✓ Security and Compliance Considerations in No-Code AI
- ✓ Best Practices for Deploying No-Code AI Solutions
- ✓ Real-World Use Cases and Applications of No-Code AI
- ✓ Scaling and Future Trends in No-Code AI

Module 11: Generative and Agentic AI on Cloud

- ✓ Deploying Generative AI Models with Amazon Bedrock
- ✓ Implementing Retrieval-Augmented Generation (RAG)
- ✓ Building and Managing AI Agents
- ✓ Serverless AI Agent Deployment
- ✓ Observability and Monitoring AI Agents
- ✓ Developing Generative AI Applications with Azure OpenAI Service
- ✓ Implementing Agentic AI Workflows with Azure Machine Learning (AML)
- ✓ Fine-Tuning Large Language Models (LLMs) on Azure
- ✓ Building AI Agents on Azure
- ✓ AI Model Deployment and Governance on Azure
- ✓ Working with Vertex AI Agent Builder
- ✓ Building No Code Conversational AI Agents