

Agentic AI Training Course - Master AI Agents

Course Curriculum : Your 11 module Learning Plan

About GlofAI

GlofAI is a leading e-learning platform providing live instructor-led interactive online training. We cater to professionals and students across the globe in categories like Big Data & Hadoop, Business Analytics, NoSQL Databases, Java & Mobile Technologies, System Engineering, Project Management and Programming. We have an easy and affordable learning solution that is accessible to millions of learners. With our students spread across countries like the US, India, UK, Canada, Singapore, Australia, Middle East, Brazil and many others, we have built a community of over 1 million learners across the globe.

About Course

Build state-of-the-art AI agents to automate your business requirements with our Agentic AI Training Course. The key highlights of our Agentic AI course are: Designed, developed, and delivered by industry veterans to help you acquire the essential skills Gain practical experience with 5+ projects, 10+ Use Cases, and 20+ Practical Hands-on Labs Build industry-grade AI agents with leading 20+ tools and frameworks from different industries Join our AI agents course and become a certified Agentic AI expert to propel your career to the next level.

Module 1: Agentic AI Essentials

Topics:

- 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

Hands on:

- Analyzing AI Agent Use Cases
- Exploring Agentic AI Frameworks

Skills you will learn:

- Understanding Agentic AI Concepts
- Identifying AI Agent Capabilities and Limitations
- Navigating AI Frameworks and Architectures
- Ethical and Responsible AI

Module 2: Agentic AI: Architectures and Design Patterns

Topics:

- 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

Hands-on:

- Designing an AI agent architecture
- Implementing different agentic AI design patterns

Skills you will Learn:

- Understanding Agentic AI Frameworks
- Implementing AI Design Patterns
- Designing Secure and Scalable AI Architectures

Module 3: Working with LangChain and LCEL

Topics:

- 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

Hands-on:

- Build a Self-correcting Coding Assistant with LangChain

Skills you will Learn:

- Data Processing with Langchain
- AI-Powered Document Retrieval
- Building AI Pipelines with LCEL

Module 4: Building AI Agents with LangGraph

Topics:

- 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

Hands-on:

- Building a Finance Bot with LangGraph

Skills you will Learn:

- State Management in AI Agents
- Implementing Long-Term AI Memory
- Deploying AI Agents with LangGraph

Module 5: Implementing Agentic RAG

Topics:

- 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

Hands-on:

- Create an AI-Powered Sales Report Analyzer with LlamaIndex
- Create a Market Research Agent with RAG & Cohere

Skills you will Learn:

- Implementing RAG Techniques
- Building AI Agents with LlamaIndex and Cohere
- Optimizing AI Retrieval Systems

Module 6: Developing AI Agents with Phidata

Topics:

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

Hands-on:

- Design a Data Analysis Agent with Phidata

Skills you will Learn:

- Building AI Agents with Phidata
- Optimizing AI Workflows

Module 7: Multi Agent Systems with LangGraph and CrewAI

Topics:

- 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

Hands-on:

- Build a Customer Support Chatbot with LangGraph
- Design a Stock Analysis Agent with CrewAI

Skills you will Learn:

- Multi Agent Systems
- Multi Agent Designs and Workflows

Module 8: Advanced Agent Development with Autogen

Topics:

- 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

Hands-on:

- Develop an AI Research Agent with Autogen

Skills you will Learn:

- Building Adaptive AI Agents
- Deploying AI Agents with Autogen

Module 9: AI Agent Observability and AgentOPs

Topics:

- Langfuse Overview
- Langfuse Dashboard
- Tracing

- Evaluation
- Managing Prompts
- Experimentation
- AI Observability with Langsmith
- Setting up Langsmith
- Managing Workflows with Langsmith
- AgentOps Practical Implementation

Hands-on:

- AI Observability with Langsmith
- AgentOps Practical Implementation

Skills you will Learn:

- Monitoring AI Agent Performance
- Managing AI Workflows
- Implementing AI Experimentation and Observability

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

Topics

- 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

Hands-on:

- Content Writer Agent in Wordware
- Design Your own SEO Agent with Relevance AI
- Creating an AI Agent with Langflow

Skills you will Learn:

- No-Code AI Development
- Workflow Automation Using AI
- Building and Deploying AI Agents

Bonus Module: Generative and Agentic AI on Cloud (Self-paced)

Topics:

- 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

Hands-on:

- Build and Deploy AI Models on AWS Bedrock, Azure OpenAI, and GCP Vertex AI

Skills you will Learn:

- Cloud-based AI Model Deployment of Generative AI Models
- AI Agent Development on Cloud