

Agentic Al Training Course - Master Al Agents

Course Curriculum: Your 11 module Learning Plan

https://www.edureka.co/agentic-ai-training-course

About Edureka

Edureka 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 skillsGain practical experience with 5+ projects, 10+ Use Cases, and 20+ Practical Hands-on LabsBuild industry-grade AI agents with leading 20+ tools and frameworks from different industriesJoin our AI agents course and become a certified Agentic AI expert to propel your career to the next level.

Curriculum

Module 1: Agentic AI Essentials

Topics:

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

Hands on:

- Analyzing Al Agent Use Cases
- Exploring Agentic AI Frameworks

Skills you will learn:

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

Module 2: Agentic AI: Architectures and Design Patterns

Topics:

- Agentic Al Architecture
- Agentic Architecture Types
- Key Components of the Agentic Al Framework
- Perception Module
- Cognitive Module
- Action Module
- Learning Module
- Collaboration Module
- Security Module
- Agentic Al 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 Al agent architecture
- Implementing different agentic AI design patterns

Skills you will Learn:

- Understanding Agentic AI Frameworks
- Implementing Al Design Patterns
- Designing Secure and Scalable Al 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
- Al-Powered Document Retrieval
- Building Al Pipelines with LCEL

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

Hands-on:

• Building a Finance Bot with LangGraph

Skills you will Learn:

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

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

Hands-on:

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

Skills you will Learn:

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

Module 6: Developing AI Agents with Phidata

- 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 Al Agents with Phidata
- Optimizing Al 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
- CrewAl Introduction
- CrewAl Components
- Setting up CrewAl environment
- Building Agents with CrewAl

Hands-on:

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

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 Al Research Agent with Autogen

Skills you will Learn:

- Building Adaptive Al Agents
- Deploying Al Agents with Autogen

Module 9: AI Agent Observability and AgentOPs

- Langfuse Overview
- Langfuse Dashboard
- Tracing

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

Hands-on:

- Al Observability with Langsmith
- AgentOps Practical Implementation

Skills you will Learn:

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

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 Al Platforms
- Building Al Workflows Without Coding
- Designing Al Agents with Drag-and-Drop Interfaces
- Integrating No-Code AI with Existing Systems
- Customizing and Fine-Tuning Al Solutions

- Optimizing Performance and Efficiency in No-Code Al
- Security and Compliance Considerations in No-Code Al
- Best Practices for Deploying No-Code Al Solutions
- Real-World Use Cases and Applications of No-Code Al
- Scaling and Future Trends in No-Code Al

Hands-on:

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

Skills you will Learn:

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

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

- Deploying Generative Al Models with Amazon Bedrock
- Implementing Retrieval-Augmented Generation (RAG)
- Building and Managing Al Agents
- Serverless Al Agent Deployment
- Observability and Monitoring Al Agents
- Developing Generative AI Applications with Azure OpenAI Service
- Implementing Agentic Al Workflows with Azure Machine Learning (AML)
- Fine-Tuning Large Language Models (LLMs) on Azure

- Building Al Agents on Azure
- Al Model Deployment and Governance on Azure
- Working with Vertex Al Agent Builder
- Building No Code Conversational Al Agents

Hands-on:

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

Skills you will Learn:

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