

Agentic AI Architecture: LangChain & AutoGPT

Learn to architect, orchestrate and deploy multi-agent AI systems using LangChain, AutoGPT and cloud platforms.

24 Hours

DURATION

9

MODULES

28

TOPICS

4

HANDS-ON ACTIVITIES

COURSE OVERVIEW

This course delves into the architecture, orchestration, and governance of Agentic AI systems, equipping professionals with the strategic and technical competencies needed to build enterprise-grade autonomous solutions. It begins by contrasting agentic and traditional AI, introducing core principles of autonomy and decision-making loops before moving into a comparative study of open-source models such as LangChain, AutoGPT, and BabyAGI. Participants will design and orchestrate scalable multi-agent workflows, integrate them with cloud platforms like Azure and AWS, and implement real-time monitoring via modern DevOps practices. The course also emphasizes robust evaluation strategies, responsible AI implementation—including bias audits and ethical safeguards—and deployment best practices such as CI/CD, enterprise integration, and governance. Capstone workshops focus on practical use case architecture, enabling learners to deliver modular, production-ready agent systems while mapping strategic trends in open-source innovation and cross-domain agent collaboration.

WHO THIS COURSE IS FOR

AI Architects

Solution Architects

Machine Learning Engineers

AI Engineers

Cloud Engineers

DevOps Engineers

PREREQUISITES

- Good Understanding of AI/ML Principles
- Intermediate level proficiency in Python
- Familiarity with cloud platforms
- Exposure to tools like Jupyter notebooks, Git and Devops tools would be helpful.

LEARNING OBJECTIVES

- Equip architects with deep understanding of Agentic AI principles and enterprise-grade design
- Enable evaluation and selection of open-source models for different agentic use cases
- Teach design of scalable, cloud-ready multi-agent systems and workflows
- Emphasize responsible AI principles, lifecycle management, and risk mitigation
- Provide practical experience architecting real-world multi-agent and autonomous systems

9 Modules, 28 Topics

01

Foundations of Agentic AI Systems

TOPICS

Characteristics vs Traditional AI · Principles of Autonomy & Decision Loops · Key Enterprise Application Patterns

02

Comparative Study of Open-Source Models

TOPICS

- Language, Vision, Multi-Modal, RL Model Categories
- LangChain, AutoGPT, BabyAGI Capabilities
- Model-Use Fit Analysis

03

Workshop

System Architecture & Orchestration

TOPICS

Multi-Agent Workflow Design · Memory, Tools, Inter-Agent Messaging · LangChain vs AutoGPT vs Custom

04

Lab

Scalability & Cloud Integration

TOPICS

Cloud Architectures (Azure, AWS, GCP) · Container Orchestration (Docker, K8s) · Real-Time Monitoring Pipelines

05

Lab

Evaluation & Lifecycle Management

TOPICS

Quantitative & Qualitative Evaluation · Continuous Learning & Feedback Loops · MLflow for Tracking

06

Workshop

Responsible AI & Risk Mitigation

TOPICS

Fairness, Explainability, Bias Audits · Fail-Safes for Agentic Systems · Ethical Design Patterns

07

Deployment Best Practices

TOPICS

Environments, CI/CD, Blue/Green Deployments · Enterprise Integration · Data Governance & Access Control · Deployment Planning

08

Strategic Roadmapping & Future Outlook

TOPICS

Cross-Domain Agent Collaboration · Future Innovations · Open-Source Trends & Partnerships

09

Architecting Use Cases (Workshops)

TOPICS

Customer Support Agent System Design · Vision-Based Automation Architecture · Modular Multi-Agent Pipelines

HANDS-ON ACTIVITIES

Practise What You Learn

#	MODULE	ACTIVITY
03	System Architecture & Orchestration	Workshop: Architecture workshop
04	Scalability & Cloud Integration	Lab: Cloud Design
05	Evaluation & Lifecycle Management	Lab: Evaluation Strategy
06	Responsible AI & Risk Mitigation	Workshop: Design Audit Workshop

WHAT IS INCLUDED

Everything You Need to Succeed

- Koenig course material for every module
- Delivery by certified instructors and subject matter experts
- Hands-on exercises throughout the course
- Course completion certificate from Koenig

ABOUT KOENIG

Who We Are

Established in 1993, Koenig Solutions is a globally recognised training provider with 35+ technology partnerships, 5,000+ training programmes and a network of certified instructors and subject matter experts, supporting individuals and enterprise teams worldwide.

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