Agentic AI Foundations

Duration: 1 Day Course Code: GK910031 Version: 2.0.1

Overview:

Learn the foundational concepts, architecture, and practical applications of agentic AI, and discover how autonomous AI agents can reason, plan, and take actions to solve complex business and technical challenges.

This course teaches how Agentic AI differs from traditional conversational systems, and how to use tools like Amazon Q, Kiro, Amazon Bedrock Agents, and Amazon Bedrock AgentCore to build autonomous, goal-driven solutions that solve real-world problems.
In this one-day course, you will explore the core principles and strategies for designing Agentic AI systems using AWS services. You will learn how Agentic AI differs from traditional conversational systems, and how to use tools like Amazon Q, Kiro, Amazon Bedrock Agents, and Amazon Bedrock AgentCore to build autonomous, goal-driven solutions that solve real-world problems.
This course includes presentations, hands-on lab, and group exercises.

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Target Audience:

This course is intended for:
- Software developers new to Agentic AI seeking foundational knowledge
- Technical professionals exploring AI capabilities and interested in core components and applications of agentic AI
- Development teams evaluating Agentic AI solutions and needing to differentiate between agent types
- AWS Users expanding into Agentic AI, including current users of Amazon Q Developer, Amazon Q Business, and Amazon Bedrock Agents

Objectives:

- This course is designed to teach participants how to:
- Summarise the evolution of Agentic AI and define what makes something "agentic"
- Identify core components of agentic systems
- Distinguish between workflow, autonomous, and hybrid agents
- Compare AWS service options for Agentic AI
- Describe capabilities and use cases of Amazon Q Developer, Amazon Q Business, and Kiro
- Explain Amazon Bedrock AgentCore and Amazon Bedrock Agents fundamentals
- Identify basic implementation patterns for Agentic AI
- Describe observability and interoperability patterns for production agentic AI systems

Prerequisites:

We recommend that attendees of this course have:

- Generative AI Essentials or equivalent work experience
- Basic AWS knowledge and software development experience
- GK4501 - AWS Technical Essentials
- GK910027 - Generative AI Essentials on AWS

Testing and Certification

None

Follow-on-Courses:

None

- GK910010 - Developing Generative AI applications on AWS

Content:

Module 1: From LLMs to Agents

- Understanding Large Language Models (LLMs)
- Innovations powering agents
- Evolution timeline from LLMs to Agents

Module 2: Exploring Agentic AI

- Understanding Agentic AI
- Types of AI agents
- Agentic AI applications

Module 3: Understanding Agentic AI Workflows

- Workflow patterns
- Amazon Bedrock flows overview

Module 4: Introducing Autonomous Agents

- How Autonomous Agents work
- ReAct
- ReWoo
- Multi-agent collaboration
- AWS Agentic AI solutions

Module 5: Amazon Q and Agentic Development Tools

- Amazon Q Developer
- Amazon Q Business
- Amazon Q in AWS Services
- Kiro: AI-powered IDE with spec-driven development

Module 6: Agentic AI with Amazon Bedrock

- Amazon Bedrock Agents
- Amazon Bedrock AgentCore
- Hands-on lab: Explore Amazon Bedrock Agents integrated with Amazon Bedrock Knowledge Bases and Amazon Bedrock Guardrails

Module 7: Building DIY Solutions

- DIY solutions
- Observability and Monitoring
- Agent Interoperability

Module 8: Course Wrap-up

- Next steps and additional resources
- Course summary

Further Information:

For More information, or to book your course, please call us on 0800/84.009

info@globalknowledge.be

www.globalknowledge.com/en-be/