

Building Advanced Agentic Systems on AWS

Duration: 1 Day **Course Code: GK910037** **Delivery Method: Company Event**

Overview:

Implement production-ready multi-agent systems using Amazon Bedrock AgentCore, covering multi-agent patterns, context optimization techniques, security configurations, and monitoring frameworks. You will examine the skills needed to move beyond proof-of-concept to scalable, secure, and observable agentic AI implementations. The course prepares you to design and deploy advanced agentic systems ready for real-world production environment.

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Company Events

These events can be delivered exclusively for your company at our locations or yours, specifically for your delegates and your needs. The Company Events can be tailored or standard course deliveries.

Target Audience:

- Software developers

Objectives:

- In this course, you will learn to do the following:
- Analyze scenarios that require multi-agent architectures.
- Describe primary multi-agent communication patterns and their use cases.
- Configure agent-as-tool patterns for production deployments.
- Implement memory sharing using available platform capabilities.
- Implement context management strategies for production workloads.
- Design context compression and optimization mechanisms.
- Optimize resource usage and cost management across multi-agent systems.
- Configure policy-based access control using AgentCore Policy Engine.
- Implement VPC integration for secure agent deployments.
- Implement distributed tracing and monitoring across multi-agent systems.
- Establish comprehensive agent evaluation frameworks.
- Configure integration patterns for enterprise observability systems.
- Establish comprehensive audit trails and compliance monitoring.
- Integrate agentic systems with production APIs and services.
- Design deployment strategies for production environments.
- Assess production readiness and establish continuous improvement processes.

Prerequisites:

We recommend that attendees of this course have knowledge of:

- Agentic AI Foundations
- Building Agentic AI with Amazon Bedrock AgentCore

Testing and Certification

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Follow-on-Courses:

None

Content:

Module 1: Multi-Agent Architecture and Communications Patterns

- Single agent limitations and multi-agent benefits
- Instructor Demonstration: Building and Deploying Intelligent Financial Agents with Amazon Bedrock Strands and AgentCore
- Task 1: Building a Personal Budget Assistant with Strands Agents
- Multi-agent communication patterns
- Memory and state management
- Instructor Demonstration: Building and Deploying Intelligent Financial Agents with Amazon Bedrock Strands and AgentCore

Task 2: Building a Multi-Agent System for Complex Financial Analysis

Module 2: Context Engineering and Performance Optimization

- Context as finite resource
- Context optimization techniques
- Tool design for context efficiency

Module 3: Security and Compliance Implementation

- Production Identity and Access Management
- VPC integration and network security

Module 4: Production Monitoring, Observability, and Evaluation

- Monitoring architecture
- AgentCore evaluation
- Enterprise observability integration
- Instructor Demonstration: Building and Deploying Intelligent Financial Agents with Amazon Bedrock Strands and AgentCore

Task 3: Deploying Production-Ready Agents with Amazon Bedrock AgentCore

Module 5: Well-Architected Agentic AI Systems

- Applying the Well-Architected framework
- Well-Architected deployment
- Production readiness

Module 6: Course Wrap-up

- Next steps and additional resources
- Course summary

Further Information:

For More information, or to book your course, please call us on Head Office 01189 123456 / Northern Office 0113 242 5931
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