Training: AWS
Building Advanced Agentic Systems on AWS

TRAINING GOALS:

In this course, you'll learn about implementing production-ready multi-agent systems using Amazon Bedrock AgentCore, covering mulit-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.

Course objectives

In this course, learners will:

- 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.

Intended audience

Compendium Centrum Edukacyjne Spółka z o.o.
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- Software developers seeking intermediate knowledge for building advanced agentic AI systems
- Technical professionals exploring AI capabilities and interested in building advanced agentic AI systems.
- Development teams building advanced agentic AI solutions.

CONSPECT:

- 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
  - Instructor Demonstration: Building and Deploying Intelligent Financial Agents with Amazon Bedrock Strands and AgentCore
- 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

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- Next steps and additional resources
- Course summary

REQUIREMENTS:

We recommend that attendees of this course have:

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

Difficulty level



CERTIFICATE:

The participants will obtain certificates signed by AWS (course completion).

TRAINER:

AWS Authorized Instructor (AAI)

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