

Szkolenie: AWS  
Developing Generative AI Applications on AWS

## DOSTĘPNE TERMINY

- 2025-07-10 | 2 dni | Warszawa / Virtual Classroom  
2025-07-28 | 2 dni | Warszawa / Wirtualna sala  
2025-08-14 | 2 dni | Kraków / Wirtualna sala  
2025-09-11 | 2 dni | Warszawa / Wirtualna sala

## Cel szkolenia:

This course is designed to introduce generative AI to software developers interested in leveraging large language models without fine-tuning. The course provides an overview of generative AI, planning a generative AI project, getting started with Amazon Bedrock, the foundations of prompt engineering, and the architecture patterns to build generative AI applications using Amazon Bedrock and LangChain.

## Course objectives

In this course, you will learn to:

- Describe generative AI and how it aligns to machine learning
- Define the importance of generative AI and explain its potential risks and benefits
- Identify business value from generative AI use cases
- Discuss the technical foundations and key terminology for generative AI
- Explain the steps for planning a generative AI project
- Identify some of the risks and mitigations when using generative AI
- Understand how Amazon Bedrock works
- Familiarize yourself with basic concepts of Amazon Bedrock
- Recognize the benefits of Amazon Bedrock
- List typical use cases for Amazon Bedrock
- Describe the typical architecture associated with an Amazon Bedrock solution
- Understand the cost structure of Amazon Bedrock
- Implement a demonstration of Amazon Bedrock in the AWS Management Console
- Define prompt engineering and apply general best practices when interacting with FMs
- Identify the basic types of prompt techniques, including zero-shot and few-shot learning
- Apply advanced prompt techniques when necessary for your use case

- Identify which prompt-techniques are best-suited for specific models
- Identify potential prompt misuses
- Analyze potential bias in FM responses and design prompts that mitigate that bias
- Identify the components of a generative AI application and how to customize a foundation model (FM)
- Describe Amazon Bedrock foundation models, inference parameters, and key Amazon Bedrock APIs
- Identify Amazon Web Services (AWS) offerings that help with monitoring, securing, and governing your Amazon Bedrock applications
- Describe how to integrate LangChain with large language models (LLMs), prompt templates, chains, chat models, text embeddings models, document loaders, retrievers, and Agents for Amazon Bedrock
- Describe architecture patterns that can be implemented with Amazon Bedrock for building generative AI applications
- Apply the concepts to build and test sample use cases that leverage the various Amazon Bedrock models, LangChain, and the Retrieval Augmented Generation (RAG) approach

#### Intended audience

This course is intended for:

- Software developers interested in leveraging large language models without fine-tuning

#### Plan szkolenia:

- Module 1: Introduction to Generative AI - Art of the Possible
  - Overview of ML
  - Basics of generative AI
  - Generative AI use cases
  - Generative AI in practice
  - Risks and benefits
- Module 2: Planning a Generative AI Project
  - Generative AI fundamentals
  - Generative AI in practice
  - Generative AI context
  - Steps in planning a generative AI project
  - Risks and mitigation
- Module 3: Getting Started with Amazon Bedrock
  - Introduction to Amazon Bedrock
  - Architecture and use cases

- How to use Amazon Bedrock
- Demonstration: Setting Up Bedrock Access and Using Playgrounds
- Module 4: Foundations of Prompt Engineering
  - Basics of foundation models
  - Fundamentals of prompt engineering
  - Basic prompt techniques
  - Advanced prompt techniques
  - Demonstration: Fine-Tuning a Basic Text Prompt
  - Model-specific prompt techniques
  - Addressing prompt misuses
  - Mitigating bias
  - Demonstration: Image Bias-Mitigation
- Module 5: Amazon Bedrock Application Components
  - Applications and use cases
  - Overview of generative AI application components
  - Foundation models and the FM interface
  - Working with datasets and embeddings
  - Demonstration: Word Embeddings
  - Additional application components
  - RAG
  - Model fine-tuning
  - Securing generative AI applications
  - Generative AI application architecture
- Module 6: Amazon Bedrock Foundation Models
  - Introduction to Amazon Bedrock foundation models
  - Using Amazon Bedrock FMs for inference
  - Amazon Bedrock methods
  - Data protection and auditability
  - Demonstration: Invoke Bedrock Model for Text Generation Using Zero-Shot Prompt
- Module 7: LangChain
  - Optimizing LLM performance
  - Integrating AWS and LangChain
  - Using models with LangChain
  - Constructing prompts
  - Structuring documents with indexes
  - Storing and retrieving data with memory

- Using chains to sequence components
- Managing external resources with LangChain agents
- Demonstration: Bedrock with LangChain Using a Prompt that Includes Context
- Module 8: Architecture Patterns
  - Introduction to architecture patterns
  - Text summarization
  - Demonstration: Text Summarization of Small Files with Anthropic Claude
  - Demonstration: Abstractive Text Summarization with Amazon Titan Using LangChain
  - Question answering
  - Demonstration: Using Amazon Bedrock for Question Answering
  - Chatbots
  - Demonstration: Conversational Interface - Chatbot with AI21 LLM
  - Code generation
  - Demonstration: Using Amazon Bedrock Models for Code Generation
  - LangChain and agents for Amazon Bedrock
  - Demonstration: Integrating Amazon Bedrock Models with LangChain Agents

## Wymagania:

We recommend that attendees of this course have:

- *AWS Technical Essentials*
- Intermediate-level proficiency in Python

## Poziom trudności



## Certyfikaty:

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

## Prowadzący:

AWS Authorized Instructor (AAI)