Course : Amazon Web Services (AWS) - Developing generative AI applications on AWS

Official course with no certification objective.

Practical course - 2d - 14h00 - Ref. DG1
Price : 1670 € E.T.

NEW

With this training course, you'll discover generative AI and learn how to exploit large language models (LLMs) without the need for tuning. You'll get an overview of generative AI, how to plan a project based on generative AI, and an introduction to Amazon Bedrock. You'll explore the basics of prompt engineering, as well as the main architecture models for building generative AI applications using Amazon Bedrock and LangChain.

Teaching objectives

At the end of the training, the participant will be able to:

- Describe generative AI and its link with Machine Learning
- Planning a generative AI project step by step
- Understand how Amazon Bedrock works and its use cases
- Familiarize yourself with the key concepts of Amazon Bedrock
- Identify the typical architecture of an application using Amazon Bedrock
- Understanding prompt engineering and applying best practices with Foundation Models (FMs)
- Know the main prompt techniques, such as zero-shot and few-shot learning.
- Describe Amazon Bedrock Foundation Models, inference parameters and essential APIs
- Integrate LangChain with LLMs, prompts, embeddings, agents and chains for Amazon Bedrock
- Identify architecture models suitable for creating generative AI applications with Amazon Bedrock
- Implement concrete use cases with Amazon Bedrock, LangChain and the Retrieval Augmented Generation approach

Intended audience

Software developers who want to exploit large language models (LLMs) without making adjustments.

PARTICIPANTS

Software developers who want to exploit large language models (LLMs) without making adjustments.

PREREQUISITES

Technical Essentials (AWG) training is recommended. Intermediate level proficiency in Python.

TRAINER QUALIFICATIONS

The experts who lead the training courses are specialists in the subjects covered. They are approved by the publisher and certified for the course. They have also been validated by our teaching teams in terms of both professional knowledge and teaching skills for each course they teach. They have at least three to ten years of experience in their field and hold or have held positions of responsibility in companies.

ASSESSMENT TERMS

Assessment of targeted skills prior to training.
Assessment by the participant, at the end of the training course, of the skills acquired during the training course.
Validation by the trainer of the participant's learning outcomes, specifying the tools used: multiple-choice questions, role-playing exercises, etc.
At the end of each training course, ITTCERT provides participants with a course evaluation questionnaire, which is then analysed by our teaching teams. Participants also complete an official evaluation of the publisher.
An attendance sheet for each half-day of attendance is provided at the end of the training course, along with a certificate of completion if the participant has attended the entire session.

Prerequisites

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Certification

Official course with no certification objective.
Comment passer votre examen ?

Practical details

Teaching methods

Training in French. Official course material in English and digital format. Good understanding of written English.

Course schedule

1 Introduction to generative AI

- An overview of machine learning.
- Basic principles of generative AI.
- Use cases for generative AI.
- Generative AI in practice.
- Risks and benefits of generative AI.

2 Planning a generative AI project

- Fundamentals of generative AI.
- Generative AI in practice.
- Background to generative AI.
- Steps for planning a generative AI project.
- Risks and mitigation measures.

3 Getting started with Amazon Bedrock

- Introduction to Amazon Bedrock.
- Architecture and use cases.
- Using Amazon Bedrock.

Demonstration

Setting up Amazon Bedrock access and using Playgrounds.

4 Prompt engineering fundamentals

- Basic principles of foundation models.
- Fundamentals of prompt engineering.
- Basic techniques for prompts.
- Advanced prompts.
- Model-specific prompt techniques.
- Identify and correct bad practices related to prompts.
- Reduce bias in the results generated.

Demonstration

Ajustement d'un prompt texte simple. Atténuer les biais dans les images générées

TEACHING AIDS AND TECHNICAL RESOURCES

The teaching resources used are the publisher's official materials and practical exercises.

TERMS AND DEADLINES

Registration must be completed 24 hours before the start of the training course.

ACCESSIBILITY FOR PEOPLE WITH DISABILITIES

Do you have specific accessibility requirements? Contact Ms FOSSE, disability advisor, at the following address: psh-accueil@orsys.fr so that we can assess your request and its feasibility.

5 Components of an Amazon Bedrock application

- Applications and use cases.
- Overview of the components of a generative AI application.
- Architecture of generative AI applications.
- Foundation Models and FM interface.
- Use of datasets and embeddings.
- Additional application components.
- RAG (Retrieval-Augmented Generation).
- Model fine-tuning.
- Securing generative AI applications.
- Architecture of a generative AI application.

Demonstration
Word embeddings.

6 Amazon Bedrock foundation models

- Introduction to Amazon Bedrock foundation models.
- Using Amazon Bedrock FM models for inference.
- Methods offered by Amazon Bedrock.
- Data protection and traceability.

Hands-on work
Call up an Amazon Bedrock template to generate text using a zero-shot prompt.

7 LangChain

- Performance optimization of LLM models.
- Integration of AWS and LangChain.
- Using templates with LangChain.
- Prompt construction.
- Structuring documents with indexes.
- Data storage and retrieval with memory.
- Using strings to sequence components.
- External resource management with LangChain agents.

8 Architecture models

- Introduction to architectural models.
- Text summary.
- Answers to questions.
- Chatbots.
- Code generation.
- LangChain and agents for Amazon Bedrock.

Hands-on work
Utilisation d'Amazon Titan Text Premier. Résumer des textes longs avec Amazon Titan. Utilisation d'Amazon Bedrock pour répondre à des questions. Construire un chatbot. Utilisation des modèles Amazon Bedrock pour générer des codes. Construire des applications avec Converse API.

Dates and locations

REMOTE CLASS
2026 : 26 Mar., 2 Apr., 18 June, 25 June, 24 Sep., 8 Oct., 10 Dec., 17 Dec.

PARIS LA DÉFENSE
2026 : 19 Mar., 11 June, 17 Sep., 3 Dec.