# Course : Developing your own intelligent agents

**Master RAG, RIG, GraphRAG and StructRAG to boost your productivity**

*Practical course - 2d - 14h00 - Ref. IAW*
*Price : 1680 CHF E.T.*

★★★★⯪  4,6 / 5

**NEW**

Design high-performance intelligent agents using RAG, RIG, GraphRAG and StructRAG architectures! Learn how to program them, optimize them and guarantee their compliance for various applications (finance, customer relations…). Improve efficiency and innovation with advanced generative AI.

## 🎯 Teaching objectives

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

- ✓ Understanding generative AI and how it differs from conversational agents
- ✓ Explore RAG, RIG, GraphRAG and StructRAG concepts and architectures
- ✓ Developing intelligent agents for various use cases
- ✓ Optimize agent performance through contextual conditioning and continuous learning
- ✓ Use GraphRAG and StructRAG to enrich and structure generated content
- ✓ Evaluate agent performance with appropriate metrics and improve efficiency
- ✓ Mastering ethical issues, bias management and regulatory compliance

## Intended audience

Professional profiles looking to exploit generative AI and intelligent agents in their field.

## Prerequisites

Notions in generative artificial intelligence. Minimal programming skills desirable. Analytical skills: ability to model use cases.

## Course schedule

## 1  Introduction to generative AI and intelligent agents

- Understanding generative AI and its applications.
- Differences between conversational agents and agents based on generative AI.
- Introduction to RAG, RIG, GraphRAG and StructRAG architectures.

## 2  Fundamentals of RAG and RIG architectures

- What is Retrieval Augmented Generation (RAG)? Concepts and use cases.
- Understand direct integration with Retrieval Interleaved Generation (RIG): strengths, weaknesses and applications.
- The role of knowledge bases and information retrieval systems.

## 3  Exploring GraphRAG and StructRAG architectures

- Introduction to GraphRAG: using graphs to enrich content generation.
- StructRAG: data structure for precision and organization.

### Hands-on work
Use cases for GraphRAG and StructRAG in complex scenarios.

## 4  Agent design and programming with RAG and RIG

- Introduction to the creation of an intelligent agent based on RAG.
- Configuration of recovery bases and integration with generation models.
- Agent development using seamless integration between retrieval and generation.
- Advanced techniques for contextual conditioning.

### Hands-on work
Development of a personalized assistant.

## 5  Advanced applications with GraphRAG and StructRAG

- Designing agents using knowledge graphs (GraphRAG).
- Workflow optimization with StructRAG.

### Hands-on work
Generate dynamic, structured reports.

## 6  Optimization and performance of intelligent agents

- Key metrics for measuring agent performance and its impact on employee performance.
- Techniques to improve agent precision and efficiency.
- Knowledge base management for continuous learning.

## 7  Managing ethical issues and compliance

- Identification and resolution of biases in RAG and RIG architectures.
- Managing confidentiality and regulatory compliance.
- Best practices to ensure transparency in agent interactions.

### 8 Future prospects and innovations in intelligent agents

- Future trends in intelligent agent development.
- Potential innovations in RAG, RIG, GraphRAG and StructRAG architectures.

**Storyboarding workshops**
Discussion on the future of intelligent agents in various sectors.

## Dates and locations

**REMOTE CLASS**
2026 : 2 July, 1 Oct., 12 Nov.