Updated 04/03/2024

Sign up

Semantic Kernel training

2 days (14 hours)

Presentation

Our Semantic Kernel training course will introduce you to this Software Development Kit (SDK), which integrates large language models (LLMs) such as OpenAI, Hugging Face and Azure OpenAI, as well as programming languages such as C#, Python and Java.

You'll learn how to automatically orchestrate plugins with AI. Thanks to semantic core planners, you'll be able to ask a language model to generate a plan to reach a user's unique goal.

Discover what's possible with Semantic Kernel using Chat Copilot, which is a chatbot that will demonstrate the power of your Semantic Kernel. By combining plugins and schedulers, you'll be able to create a chatbot capable of sustaining long conversations.

During this course, you'll be able to easily create agents capable of calling your existing code, answering your questions and automating your processes.

This course will introduce you to the latest version of Semantic Kernel (at the time of writing dotnet-1.0.1).

Objectives

- Explore and understand how a semantic kernel works
- Learn to use nested functions in prompts
- Mastering AI agent design

Target audience

- Developers

- **IT professionals**
- Engineers

Prerequisites

- Good knowledge of programming and software development
- Understanding of the fundamental concepts of artificial intelligence and natural language processing

Semantic Kernel training program

Rapid engineering

- Understanding prompts
- Creating your first prompt
- Prompt configuration
- Save your prompts as files
- Calling nested functions in prompts
- Syntax of the prompt template

Designing AI agents

- Creating your first agent
- Initialize kernel
    - Understanding the core
    - Artificial intelligence services added to the kernel
- Add plugins to your agent's skills
    - Native functions
    - Understanding plugins
    - OpenAI plugins
    - Ready-to-use plugins
- Enhance automation with planners
    - Understanding planners
    - Evaluation with rapid flow

Souvenirs

- How does semantic memory work?
    - Conventional key-value pairs
    - Conventional local storage
    - Semantic memory search
- Understanding integrations
- Integration with LLM AI
- Store context in vector databases

Chat Copilot

- About Chat Copilot
- Run Chat Copilot locally
- Customize Chat Copilot
- Test plugins
- Deployment

Visual Studio Code

- Understanding how to use Visual Studio Code for Semantic Kernel
- Testing semantic functions
- Highlighting syntax for semantic functions
- Code completion for semantic functions
- LLM model selector

Companies concerned

This training course is aimed at both individuals and companies, large or small, wishing to train their teams in a new advanced computer technology, or to acquire specific business knowledge or modern methods.

Positioning on entry to training

Positioning at the start of training complies with Qualiopi quality criteria. As soon as registration is finalized, the learner receives a self-assessment questionnaire which enables us to assess his or her estimated level of proficiency in different types of technology, as well as his or her expectations and personal objectives for the training to come, within the limits imposed by the selected format. This questionnaire also enables us to anticipate any connection or security difficulties within the company (intra-company or virtual classroom) which could be problematic for the follow-up and smooth running of the training session.

Teaching methods

Practical course: 60% Practical, 40% Theory. Training material distributed in digital format to all participants.

Organization

The course alternates theoretical input from the trainer, supported by examples, with brainstorming sessions and group work.

Validation

At the end of the session, a multiple-choice questionnaire verifies the correct acquisition of skills.

Sanction

A certificate will be issued to each trainee who completes the course.