Learn how to build Generative AI solutions with Semantic Kernel in a day. This involves learning Semantic Kernel and Azure AI services such as: Azure OpenAI, Speech and Search.

# Objectives

After completing this training, students will be able to:

* Author their own copilots using Semantic Kernel.
* Understand how LLM Apps can be implemented.
* Create AI plugins using semantic and native functions.
* Automate complex tasks execution with planners.
* Create prompt templates to define AI functions.
* Embed Generative AI in their applications.

## Course Material

* Workshop Slide Deck
* Workshop Labs
* Semantic Kernel Documentation
* Semantic Kernel Repo with Samples
* Design and implement LLM Apps with Semantic Kernel
* Orchestrating AI plugins with Semantic Kernel



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**Data and AI:**

**Semantic Kernel in a Day**

**Workshop**

**Focus Area:**

Business/IT Alignment

**Duration:**

1

day

**Difficulty:**

300

-

Advanced

**Overview**

**Key Takeaways**

## Hands-on Labs

* Most of the concepts covered above will be supported by hands-on labs and demos.

# Agenda

* Introduction to LLMs: GPTs and other models.
* Copilot Stack Overview.
* Semantic Kernel Concepts.
* Caso simples (exemplo classificar artigo Wikipedia)
* Contact Center Analytics
* Chat with you data

# Course Details (ATUALIZAR REVISAR)

## Lesson 1: Introduction to LLMs and Azure AI Services

* Introduction to LLMs: GPTs and other models.
* LLMOps: applying MLOps principles to LLM Solutions.
* Azure OpenAI Service Overview.
* Azure Machine Learning Service Overview.

## Lesson 2: Building LLMs Orchestration Flows

* AzureML prompt flow.
* Building LLMs Orchestration Flows.

**Lesson 3: Evaluating and Deploying LLMs**

* Evaluating LLMs Solutions.
* Deploying LLMs Flows.

**Lesson 4: Monitoring and Responsible AI**

* Monitoring LLMs orchestration flows.
* Content safety to protect your solution.

## Lesson 5: Automating Everything

* Github and Github Actions.
* Evaluation and Deployment Automation.

### Lesson 6: Best Practices and Lessons Learned

* Learn some best practices on service limits, setting up workspaces, and Security.
* Final discussions and wrap-up.



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| --- | --- | --- |
| **Recommended Qualifications**  This course is designed for ML Engineers and App developers who will work on Large Language Model solution projects. Additionally, we recommend that participants already have some exposure to Machine Learning and Large Language Model concepts and techniques.    While the basic concepts of Azure or Python Scripting are utilized, they will not be covered in this course. It is expected that attendees already possess these skills/experience. | **Hardware Requirements** | |
| •  •  •  •  •  • | An Intel Core-i5-based PC  Microsoft/Windows Live ID to connect to the virtual environment 4 GB RAM  128 GB HDD  Windows 7 SP1 or later  Internet access with at least 10 Mbps bandwidth per student. |