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Sign up

Langchain training: LLM Framework

3 days (21 hours)

Presentation

Our LangChain training course will enable you to develop applications powered by language models. This framework, specialized in generative AI, will help you design powerful applications that are totally different.

During this course, you'll discover LangChain's vast environment and the full range of features that can be used to meet your needs.

Thanks to Large Language Models (LLMs), you can create truly powerful applications by combining models with various sources of calculation or knowledge.

At the end of this course, you'll learn how to understand code by building plugins and custom agents.

As with all our training courses, this one will be presented with the latest version of LangChain v0.3.8.

Objectives

- Create and deploy agents
- Chatbot design and customization
- Creating a custom agent
- Understanding the LangChain code and ecosystem

Target audience

- Data Scientist
- Big Data Engineer

- Machine Learning Engineer
- Lead Developer
- Developers

Prerequisites

- Application design basics
- Master the Python language

Software requirements

- API access to OpenAI with GPT4 (chargeable)
- a Google account for access to Google Colab (free) - optional if local notebook
- a LangChain.com account and an API key (free)
- a Pinecone.io account for vector DB (free)
- an exa.ai account for the LLM search engine (free)
- an app.tavily.com account for the LLM search engine (free)

LangChain training program

Introduction

- Introducing Langchain
- Installing and configuring Langchain
- Building a language model application: LLM
  - LLM: Getting predictions from a language model
  - Prompt templates: managing LLM prompts
  - Chains: Combine LLMs and prompts in multi-step workflows
  - Dynamically call strings based on user input
  - Adding status to chains and agents
  - Get complete messages from a chat template

Models

- Model types
  - Large Language Models (LLM)
  - Cat models
  - Text integration templates
- Instructions
  - Getting started
  - LLM prompt templates
  - Chat prompt templates
  - Example selectors
- Memory
  - Load documents from various sources
  - Overview and different types of Text Splitters

- Action agents
  - AgentFinish
  - Agent Executor
  - Autonomous agents
  - Agent simulations

Chatbots

- Recreate a ChatGPT-like experience with ChatGPT Clone
- Using different types of Conversation Memory
- Create an agent optimized for conversation
- Create a voice assistant with LangChain

Code comprehension

- Index the code base
- Code integration and store
- Building the Retriever
- Building the conversational chain
- Define a list of questions to ask to generate contextual answers

Evaluation in LangChain

- Agent benchmarking
- Agent VectorDB Question Answering Benchmarking
- Benchmarking model
- LLM Mathematics
- Evaluating an OpenAPI chain
- Using hugging face datasets

Companies concerned

This 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.