AMBIENT-IT

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Sign up

Mixtral training: Mistral's most powerful model

2 days (14 hours)

Presentation

Our Mixtral training course will teach you how to configure LLM so that you can install it and optimize it for your exact needs.Mistral AI, the company that created it, offers a high-performance generative AI that can be used locally, and whose performance is comparable to ChatGPT. It uses a high-quality SMoE model designed specifically for the company and operating under the Apache license.

The course will familiarize you with the fundamental concepts of Mixtral, such as deployment and integration, hardware requirements and environment configuration.

Our program will also cover the formulation of effective prompts, inference techniques, and practical exercises in interacting with the model. You'll also learn fine-tuning principles that will enable you customize the AI to your needs and optimize its performance. By the end of the , you'll have mastered Mistral's most powerful language model.

This training session will take place on Mixtral version 8x22B.

Objectives

- **Installing and configuring Mixtral**
- How to write effective prompts
- Deploying and integrating Mixtral into an environment

Target audience

- **Developers**
- Prompt engineer

- Automation manager

Prerequisites

Knowledge of a programming language.

Technical requirements

- A machine with 64 GB RAM and 2 GPUs
- Get a Hugging Face account
- Have RunPod installed

OUR MIXTRAL TRAINING PROGRAM

INTRODUCTION TO MIXTRAL 8X22B

- Introduction to Mixtral 8x22b
- the basics and benefits of technology
- Main features
- Use case
- Mixtral demonstration
- Current limits and unexplored areas

MIXTRAL DEPLOYMENT AND INTEGRATION

- Hardware requirements
- Configuring the development environment
- Load and prepare dataset
- Deploy Mixtral on platforms such as RunPod
- Upload customized model to Hugging Face hub

FORMULATING PROMPTS AND INTERACTING WITH MIXTRAL

- Formulating effective prompts
- Inference techniques
- Using the library
- Transformers
- Text generation techniques
- Practical exercises in interacting with the model

MIXTRAL CUSTOMIZATION AND FINE-TUNING

- Introduction to fine-tuning and TRL
- Quantifying Mixtral
- 4-bit quantization and GPTQ
- Model specialization
- Performance evaluation and testing

ADDITIONAL RESOURCES

- Identify and explore additional resources
- Use warnings
- Work in progress and tool upgrades
- Summary of acquired skills
- Open discussion and experience sharing
- Conclusion

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 enabling 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 with regard to 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, 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.