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Sign up

ZenML training: the best of MLOPS

3 days (21 hours)

Presentation

Our ZenML End-to-End MLOPS training will enable you to easily create data pipelines for artificial intelligence. ZenML is an open-source framework based on MLOps practices that aims to unite different AI tools to enable data scientists, machine learning engineers to collaborate effectively.

Our training covers the key components, including pipelines, stages, artifacts and models. You'll also learn how to track the performance and versions of your ML models through ZenML's features.

Our training also covers advanced functions such as deployment and orchestration, including configuration for distributed computing resources.

As with all our training courses, we will present the latest version of the project: ZenML 0.55.1

Objectives

- Configuring ZenML
- Create data pipelines
- Pipeline monitoring

Target audience

- **Data scientists**

Prerequisites

- Knowledge of Python
- Knowledge of Machine Learning

Hardware requirements

- Have a recent version of Python installed

OUR ZenML TRAINING PROGRAM

INTRODUCTION TO ZENML

- ZenML and its role in the MLOps ecosystem
- The benefits of ZenML for machine learning projects
- Key components: pipelines, stages, artifacts, and models
- Install ZenML
- Configuring the working environment

CREATE YOUR FIRST ML PIPELINE

- A simple example of an ML pipeline
- Understand the orchestration of stages in a pipeline.
- Basic controls
- Configuration of various stages and experiments
- Analyze results and generated artifacts

DATA MANAGEMENT AND VERSIONING

- Managing datasets
- Versioning and reproducibility
- Caching mechanisms
- Data tracking features
- Object recovery after pipeline execution

MONITORING AND STRUCTURING OF ML MODELS

- Performance monitoring
- ML model versions
- Structuring pipelines, models and artifacts
- Importance of structuring for maintenance
- Integrate experiment monitoring tools such as MLflow or TensorBoard
- Document and manage changes in ML pipelines

DEPLOYMENT AND ORCHESTRATION WITH ZENML

- Deployment options for ZenML
- Configuring and managing ZenML stacks
- Customize pipeline execution
- Connect ZenML to remote storage
- ML pipeline orchestration and scalability
- Configuring pipelines for distributed computing resources

ADVANCED INTEGRATION AND CUSTOMIZATION

- Installation and configuration with other ML tools
- Customized components
- Activate and use a remote battery
- Common errors
- Version control tools

CONCLUSION AND BEST PRACTICES

- Key concepts and acquired skills
- CI/CD best practices
- Case studies
- Independent study
- Assessment of knowledge through a practical test

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 inputs from the trainer supported by examples and

brainstorming sessions and group work.

Validation

At the end of the session, a multiple-choice questionnaire is used to check that skills have been correctly acquired.

Sanction

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