AMBIENT-IT

+33 (0)1 48 10 09 46
formation@ambient-it.net
140 Avenue Jean Lolive 93500 Pantin - France

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Sign up

PyCaret training

2 days (14 hours)

Presentation

MLOps (Machine Learning Operations for Production) is a set of standardized practices used to build, deploy and manage the lifecycle of Machine Learning models. **PyCaret** is an open source machine learning library based on Python.

PyCaret is simple and easy to use. It provides simplified code that can divide your number of lines of code by a hundred. This makes the experimentation cycle fast and efficient.

PyCaret lets you rapidly build and deploy ML project prototypes.
"end-to-end. Operations in PyCaret are stored sequentially in a pipeline that is orchestrated for deployment.

Our MLOps with PyCaret training course will teach you how to prepare your data for deployment, implement ML projects and produce pipelines. You'll discover PyCaret's new features, such as integration with Docker, fast API, Streamlit, and their application in the MLOps environment.

You'll discover the latest version of the tool: MLOps 0.66.0 and Pycaret 2.3.

Objectives

- Master the MLOps and PyCaret concepts
- Implementing an end-to-end Machine Learning project with pipeline production
- Prepare your data for deployment in the MLOps environment
- Apply PyCaret modules and functions to MLOps
- Mastering the PyCaret experimentation cycle

Target audience

- Web developers
- Data analysts
- Machine Learning engineers
- Security Developer
- Artificial Intelligence Engineer

Prerequisites

- Knowledge of the Python language

PyCaret training program

Introduction

- PyCaret basics
- MLOps fundamentals
- Installing PyCaret
- Machine Learning pipeline
- Pipeline models
- ML workflow automation

ML life cycles

- Machine learning workflow
- Data Sourcing & ETL
  - Extracting data
- Exploratory data analysis
- Data preparation
  - Drive assembly
  - Test set
  - Imputation of missing values
- Model training and selection
- Deployment and monitoring

PyCaret modules

- Classification
- Regression
- Clustering
- Fault detector
- Natural language processing
- Extraction of association rules

PyCaret features

- Setting up the PyCaret environment
- Comparison of modeling algorithms
- Model evaluation using graphics
- Drive and fine-tune the model
- Predict using a trained model
- Saving and loading a model

Experimentation cycle

- Low-code alternative library
- Data preparation
- Creating a model
- Setting hyperparameters
- Model selection
- Analysis and interpretation

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.