

Developing and Deploying AI/ML Applications on Red Hat OpenShift AI (AI267)

ID AI267 **Price** 2,805.— €excl. tax **Duration** 3 days

Course Overview

An introduction to developing and deploying AI/ML applications on Red Hat OpenShift AI.

Developing and Deploying AI/ML Applications on Red Hat OpenShift AI (AI267) provides students with the fundamental knowledge about using Red Hat OpenShift for developing and deploying AI/ML applications. This course helps students build core skills for using Red Hat OpenShift AI to train, develop and deploy machine learning models through hands-on experience.

This course is based on Red Hat OpenShift ® 4.14, and Red Hat OpenShift AI 2.8.

Who should attend

- Data scientists and AI practitioners who want to use Red Hat OpenShift AI to build and train ML models
- Developers who want to build and integrate AI/ML enabled applications
- Developers, data scientists, and AI practitioners who want to automate their ML workflows
- MLOps engineers responsible for operationalizing the ML lifecycle on Red Hat OpenShift AI

Prerequisites

- Experience with Git is required
- Experience in Python development is required, or completion of the [Red Hat Training Presents: Introduction to Python Programming \(AD141\)](#) course
- Experience in Red Hat OpenShift is required, or completion of the [Red Hat OpenShift Developer II: Building and Deploying Cloud-native Applications \(DO288\)](#) course
- Basic experience in the AI, data science, and machine learning fields is recommended

Course Objectives

Impact on the Organization Organizations collect and store vast amounts of information from multiple sources. With Red Hat OpenShift AI, organizations have a platform ready to analyze data, visualize trends and patterns, and predict future business outcomes by using machine learning and artificial intelligence algorithms.

Impact on the Individual As a result of attending this course, you will understand the foundations of the Red Hat OpenShift AI architecture. You will be able to install Red Hat OpenShift AI, manage resource allocations, update components and manage users and their permissions. You will also be able to train, deploy and serve models, including how to use Red Hat OpenShift AI to apply best practices in machine learning and data science. Finally you will be able to define and set up data science pipelines with Red Hat OpenShift AI.

Course Content

Course Content Summary

- Introduction to Red Hat OpenShift AI
- Data Science Projects
- Jupyter Notebooks
- Red Hat OpenShift AI Installation
- Users and Resources Management
- Custom Notebook Images
- Introduction to Machine Learning
- Training Models
- Enhancing Model Training with RHOAI
- Introduction to Model Serving
- Model Serving in Red Hat OpenShift AI
- Introduction to Data Science Pipelines
- Working with Pipelines
- Controlling Pipelines and Experiments

Detailed Course Outline

Introduction to Red Hat OpenShift AI

- Identify the main features of Red Hat OpenShift AI, and describe the architecture and components of Red Hat AI.

Data Science Projects

- Organize code and configuration by using data science projects, workbenches, and data connections

Jupyter Notebooks

- Use Jupyter notebooks to execute and test code interactively

Red Hat OpenShift AI Installation

- Install Red Hat OpenShift AI and manage Red Hat OpenShift AI components

User and Resource Management

- Manage Red Hat OpenShift AI users and allocate resources

Custom Notebook Images

- Create and import custom notebook images in Red Hat OpenShift AI

Introduction to Machine Learning

- Describe basic machine learning concepts, different types of machine learning, and machine learning workflows

Training Models

- Train models by using default and custom workbenches

Enhancing Model Training with RHOAI

- Use RHOAI to apply best practices in machine learning and data science

Introduction to Model Serving

- Describe the concepts and components required to export, share and serve trained machine learning models

Model Serving in Red Hat OpenShift AI

- Serve trained machine learning models with OpenShift AI

Introduction to Data Science Pipelines

- Define and set up Data Science Pipelines

Working with Pipelines

- Create data science pipelines with the Kubeflow SDK and Elyra

Controlling Pipelines and Experiments

- Configure, monitor, and track pipelines with artifacts, metrics, and experiments

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