

Oracle Cloud Infrastructure Data Science Professional

Course Duration: 16 Hours

Course Code: OCI-DS-PROF

1. Course Overview

The Oracle Cloud Infrastructure (OCI) Data Science Professional course is designed for professionals who want to build, train, manage, and deploy machine learning models at scale using OCI services. This course provides in-depth knowledge of the OCI Data Science platform, advanced machine learning techniques, model lifecycle management, and best practices for data science workflows in cloud environments.

2. What You'll Learn?

By the end of this course, you will:

- Understand the architecture and capabilities of OCI Data Science.
- Learn to prepare, clean, and transform large datasets for machine learning.
- Build, train, evaluate, and tune ML models using OCI Data Science.
- Implement MLOps practices for model lifecycle management.
- Deploy and monitor models in production environments.
- Apply advanced techniques for security, governance, and automation in OCI Data Science.

3. Target Audience

This course is ideal for:

- Data Scientists and ML Engineers who want to leverage OCI.
- Cloud Professionals working with machine learning and AI.
- Developers looking to integrate ML models into enterprise applications.
- IT Professionals seeking OCI Data Science certification.

4. Pre-Requisites

Before attending this course, learners should have:

- Basic understanding of machine learning concepts and workflows.
- Familiarity with Python programming.
- Knowledge of cloud computing concepts (preferably Oracle Cloud Infrastructure).
- Prior hands-on experience with data analysis tools is recommended.

5. Course Content

Module 1: Introduction to OCI Data Science

- Overview of OCI services for Data Science
- Setting up Data Science environments
- Key features and architecture

Module 2: Data Preparation and Exploration

- Importing and cleaning datasets
- Data wrangling and preprocessing
- Feature engineering techniques

Module 3: Model Development in OCI

- Building and training ML models
- Hyperparameter tuning and optimization
- Evaluating model performance

Module 4: Model Deployment and Monitoring

- Deploying models on OCI
- Model inference and scaling
- Monitoring models in production

Module 5: MLOps and Lifecycle Management

- Best practices for model governance
- Automating pipelines with OCI Data Science
- Security and compliance considerations

Module 6: Advanced Use Cases and Integrations

- Integrating OCI Data Science with other OCI services
- Real-world ML applications on OCI
- Case studies and hands-on labs