



UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

SYLLABUS DEL CORSO

Big data processing Lab

2122-104R-BDatap-lab

Learning objectives

The course aims to introduce the advanced use of data-intensive applications based on DataOps principles, which include principles of orchestration of resources and application components, distributed cloud hybrid software infrastructures and the use of infrastructure code.

Contents

In particular, the course will cover the following technical contents:

1. Introduction to the use of DataOps, Data Warehousing, and Data Quality principles;
2. Introduction to the use of containers and their orchestration;
3. Introduction to the use of Serverless computing for data-intensive applications, through the RADON suite and other open-source implementations;
4. Introduction to the use of practical MLOps approaches, exemplified by the DataRobot suite;

Detailed program

Prerequisites

- Fundamentals of python programming and use of big data frameworks (e.g., Apache Spark, Cassandra);

- Fundamentals of distributed software architectures and their requirements engineering & design;

Teaching methods

The course will be divided into lectures, self-study, invited seminars and interactive sessions.

Assessment methods

A practical hands-on session on a known MLOps-type suite will be used to concretely apply the learned contents.

Textbooks and Reading Materials

None (articles and material provided by the teacher).

Semester

Teaching language

Sustainable Development Goals

QUALITY EDUCATION
