



UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Industry Lab

2021-2-F9101Q035

Aims

The contents of the Industry Lab change every year, and refer to hot topics for industries and companies. This year the topics addressed are: Natural Language Understanding, unsupervised anomaly detection and image segmentation. Several companies have managed a packet of 6/7 hours proposing a problem about those topics to students, that individually or in group will investigate for a solution. At end solutions proposed by students will be compared and commented.

Contents

Application of statistical and machine learning techniques to solve problems of various nature and objectives, inherent in the industrial sector.

The problems are proposed by companies outside the university participating in the course and making real production data available to the students.

Detailed program

The theoretical part of the course focuses on the Industry 4.0 topic in order to best contextualize the project activities in this field of study.

The part of the course that focuses on the projects is organized in multiple classes that have the following structure:

- review of the main statistical and machine learning models and techniques (in Python)

- problem proposal and presentation by the contact persons of the collaborating companies
- class and home work by the students, followed by the project development
- discussion and comparison of solutions investigated by students

Prerequisites

Courses held in the first and second year on statistics, machine learning, decision models, ict technologies.

Teaching form

Problem proposal, group work, revisions and feedback, discussion and comparison of solutions.

Textbook and teaching resource

Will be ready one week before every slot of lessons.

Semester

Second semester

Assessment method

Quality assessment of written documentation, software code and oral presentation.

Office hours

Monday at 12:00
