UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Big Data in Economics

2122-2-F9101Q018-F9101Q018M

Learning objectives

The course aims to develop the skills to apply data analysis to economic and business problems.

Specifically, it analyzes with case studies and datasets three fundamental problems: causal effects, prediction, and unsupervised classification.

Contents

The course is divided into 4 parts.

algorithm

Detailed program

1. Introduction and definition of the problem: the Big Data Challenge

2. The role of uncertainty: Cause, prediction and unsupervised classification.

3. Causal mechanisms: fundamental elements and a case study.

4. Prediction: the challenge of assessing uncertainty in predictive models.

5. Unsupervised learning: Self-Organizing-Map and marketing

6. Bonus track: the analysis of drift in business models.

7. Reporting of company results: creating a narrative around the model

Prerequisites

Teaching methods

lectures, debates, presentations, computer lab

Assessment methods

Attending students: project and written exam.

Non-attending students: written exam.

Textbooks and Reading Materials

The reading material is based on journal articles and selected book chapters. The material will be available on the e-learning platform.

Book

Data Science for Business
What You Need to Know about Data Mining and Data-Analytic Thinking
By Foster Provost, Tom Fawcett

Semester

II semester

Teaching language

English