COURSE DETAIL

BIG DATA AND ANALYTICS
Country Italy
Host Institution University of Bologna
Program(s) University of Bologna
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Statistics
UCEAP Course Number 170
UCEAP Course Suffix
UCEAP Official Title BIG DATA AND ANALYTICS
UCEAP Transcript Title BIG DATA & ANALYTCS
UCEAP Quarter Units 6.00
UCEAP Semester Units 4.00

Course Description

This course is part of the LM degree program and so is intended for advanced level students. Enrollment is by consent of the instructor. This course discusses fundamentals of the most important multivariate techniques that help to make intelligent use of large data base by recognizing patterns for predicting or estimating an output based on one or more inputs. At the end of the course the student is able; to represent and organize knowledge about big data collections; to turn data into actionable knowledge; and to choose the best suited methodology for the problem at hand to critically interpret the results. The course discusses topics including an introduction to supervised statistical learning; resampling methods: Cross-Validation, and Bootstrap; classification: Naive Bayes, k-Nearest Neighbors, Logistic Regression, and Linear Discriminant Analysis; Dimension Reduction and Regularization; Tree-based methods: Regression and Classification trees, Bagging, Random Forests, and Boosting; and an overview of the main machine learning methods: Support Vector Machines, and Neural Networks.

Language(s) of Instruction
English

Host Institution Course Number
96804

Host Institution Course Title
BIG DATA AND ANALYTICS

Host Institution Course Details
https://www.unibo.it/en/teaching/course-unit-catalogue/course-unit/2022/469997

Host Institution Campus
BOLOGNA

Host Institution Faculty

Host Institution Degree
LM in STATISTICS, ECONOMICS, AND BUSINESS

Host Institution Department
Statistical Sciences

Course Last Reviewed
2022-2023

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