COURSE DETAIL

MACHINE LEARNING
Country United Kingdom - England
Host Institution London School of Economics
Program(s) London School of Economics
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Statistics Mathematics
UCEAP Course Number 105
UCEAP Course Suffix
UCEAP Official Title MACHINE LEARNING
UCEAP Transcript Title MACHINE LEARNING
UCEAP Quarter Units 6.00
UCEAP Semester Units 4.00

Course Description

The primary focus of this course is on the core machine learning techniques in the context of high-dimensional or large datasets (i.e. big data). The first part of the course covers elementary and important statistical methods including nearest neighbors, linear regression, logistic regression, regularization, cross-validation, and variable selection. The second part of the course deals with more advanced machine learning methods including regression and classification trees, random forests, bagging, boosting, deep neural networks, k-means clustering and hierarchical clustering. The course will also introduce causal inference motivated by analogy between double machine learning and two-stage least squares. All the topics are delivered using illustrative real data examples. Students also gain hands-on experience using R or Python (programming languages and software environments for data analysis, computing and visualization).

Language(s) of Instruction
English

Host Institution Course Number
ST310

Host Institution Course Title
MACHINE LEARNING

Host Institution Course Details
https://www.lse.ac.uk/resources/calendar2022-2023/courseGuides/ST/2022_ST310.htm

Host Institution Campus
London School of Economics

Host Institution Faculty

Host Institution Degree

Host Institution Department

Statistics

Course Last Reviewed
2022-2023

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