21E035

Machine Learning for Economists

Term 2 - 6 ECTS

Elective Course

Prof. Jose G.Montalvo and TBA

Prerequisites to Enroll

Econometrics (first term)

Overview and Objectives

The objective of this course is to introduce machine learning techniques to students familiar with basic econometrics. The course assumes good knowledge of linear regression and builds from there. The emphasis is on understanding some basic theoretical concepts and its similarities/differences with the view from standard econometrics, the working of the algorithms, and applications to real data (credit scoring, recommendations, market segmentation, text analysis of monetary policy statements, judicial decisions, high frequency macroeconomics, etc.).

Course Outline

TBD.

Required Activities

TBD.

Evaluation

TBD.

Competences

☐ Capacity of utilization of the theoretical instruments of the to analyze situations of coherent form.

☐ Ability to use the appropriate (statistical and numerical) techniques.

☐ Ability to identify and successfully search for the data necessary for the analysis, either grossly or in the form of more elaborate databases.

☐ Ability to make independent judgments and defend them dialectically.

☐ Ability to write formal reports.

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Machine Learning for Economists

☐ Acquire a solid knowledge base for the study of quantitative issues.

☐ Ability to Recognize and know how to use the principles of econometrics and statistics.

☐ Ability to work with microeconomic analysis tools and their empirical and theoretical applications.

Learning Outcomes

☐ Students should get an overview of economic and financial theory.

☐ Students must be able to recognize theories and present arguments with precise examples.

☐ Students will have the ability to understand how markets work and explain their weaknesses.

☐ Students will acquire the technical tools that will allow them to perform the advanced analytics required in the second module as econometric methods.

☐ Students will know what the appropriate inference for each situation is.

Materials

TBD.