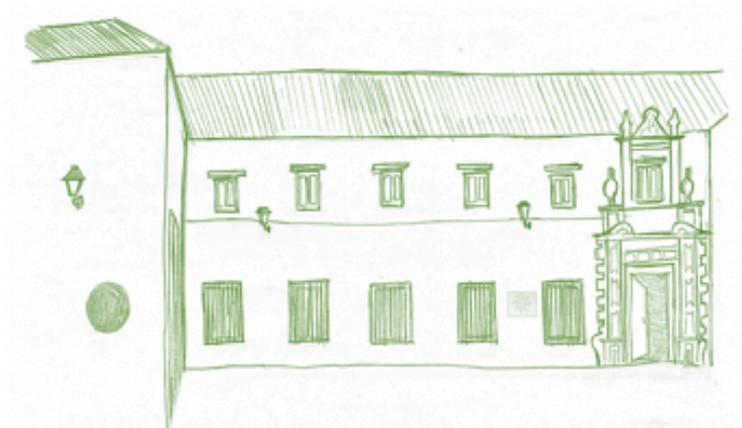


MACHINE LEARNING WITH

STATA® 16



STATA 2020

Escuela de especialización de STATA



STATA 2020 Escuela de Especialización de STATA

MACHINE LEARNING WITH



Dates: 8, 9, 13 and 14 October 2020

Time schedule: 16:00-20:00 (GMT+2)

Location: Online learning thorough UNIA's virtual campus. This comprehensive webinar is hosted through Blackboard and runs over a total of 16 hours. Four days of online instruction for four hours per day. Although we recommend joining the seminar live, participants also have the option to take the course asynchronously by viewing the lecture videos at your convenience. The video recordings will be available within 24 hours of each session, meaning that you will get all of the class discussion and exercise solutions even if you cannot participate synchronously.

Delivered by: Achim Ahrens, PhD. ETH Zürich, Public Policy Group

Overview

The proliferation of large and complex datasets has opened several avenues for research. Researchers of different disciplines are exploring and using alternative approaches that go beyond the traditional methods in their respective scientific fields. A prominent example is the field of Machine Learning, which has its origins in the intersection of statistics and computer science, but has recently gained traction in social science, economics, psychology, epidemiology and marketing, among others.

The advantages of Machine Learning for classification and prediction tasks have generated a growing interest for these methods. Responding to this trend, this course offers a first approach to Machine Learning techniques using Stata, aimed at Stata users that are not yet familiar with Machine Learning.

This workshop will attempt to demystify the field of Machine Learning and compare it with traditional statistical approaches in economics and social sciences. We discuss relative strengths and weaknesses and how machine learning can facilitate causal inference.

Prerequisites

Knowledge of basic statistics and econometrics (e.g. OLS, logit), Stata (introductory level at least) is required. The course is open to people coming from all scientific fields, but it is particularly targeted to researchers working in the socio-economic and life sciences.

Methodology

Over four days, participants will join the course via Blackboard to participate in lectures and interact with the instructor. Although we recommend joining the seminar live, participants also have the option to take the course asynchronously by viewing the lecture videos at your convenience. The video recordings will be available within 24 hours of each session, meaning



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that you will get all of the class discussion and exercise solutions even if you cannot participate synchronously. Temporary, time limited licences for the software(s) used in the course will be provided. You are required to install Stata (provided prior to the start of the course) and Python prior to the course.

Preliminary course agenda

8th october

16:00-18:00 What is Machine Learning?
18:00-20:00 Examples of Machine Learners: Supervised and unsupervised learners

9th october

16:00-18:00 Regularized Regression: Lasso, Ridge & Elastic net
18:00-20:00 From theory to practise: Lassopack and Stata 16's `lasso`

13th october

16:00-18:00 Random forest and Boosting with Python & Stata
18:00-20:00 Exercises, Q&A

14th october

16:00-18:00 Causal inference with Machine Learning: Post-double selection;
Double/debiased Machine Learning; Other recent developments
18:00-20:00 Exercises, Q&A

Registration

Registration closes 2 calendar days prior to the start of the course (6th october 2020)

Fees: 168 euros

How to pay: Fill in and submit the application form (<http://unia.es/solicitudCursoSTATA>) to larabida@unia.es. The payment must be done by bank transfer. Please send us proof of the transaction by e-mail joint to your identification card or passport.

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Instructor



Achim Ahrens joined the Public Policy Group in September 2019 as a Data Scientist. Achim has an undergraduate degree in Economics and Social Sciences from the University of Erfurt, an MSc in Economics from the University of Edinburgh and holds a PhD from Heriot-Watt University. Before joining the Public Policy Group, he was a Post-doctoral Research Fellow at the Economic and Social Research Institute in Dublin, Ireland. Achim has worked on empirical projects in a wide range of fields including housing markets, energy economics and conflict research. Achim has a strong interest in applied econometrics, causal inference, machine learning and spatial econometrics.

Academic coordination

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