PYTHON PROGRAMMING AND MACHINE LEARNING FOR ECONOMISTS

Aug. 17 - 21, 2020

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The aim of this practical course is to enable participants to start their own projects using Python by introducing the most important packages available and apply the most important Machine Learning models used in economics including very recent developments in Machine Learning for Econometrics ("causal Machine Learning").

Prerequisite: If you do not have any programing experience using Python, you need to participate to a short pre-course online to learn the basics. It is interactive and free of charge.

Time table: In the morning lectures and in the afternoon supervised practical implementations. The course starts on Monday Aug. 17 at 9:30am and ends on Aug. 21, 2020 at 3:00pm.

Syllabus:

Unit 1: Empirical research in the Python environment
Unit 2: Project management
Unit 3: Machine Learning (mostly supervised)
Unit 4: Natural Language Processing

Required literature:
· Shapiro, J. and M. Gentzkow: "Code and Data for the Social Sciences: A Practitioners Guide"
· Gentzkow, M., B. Kelly and M. Taddy (JEL 2019): "Text as Data"

Further readings:
· Downey, Allen B.: "How to think like a Computer Scientist"
· Mueller, A. and Sarah Guido: "Introduction to Machine Learning with Python"