Seminar: Current Issues in Economics / Accounting (6 ECTS)

Machine Learning in R

The Institute of Public Economics II (Prof. Dr. A. Prinz) and the Research Team Berens (Prof. Dr. W. Berens) offers a seminar on 'Machine Learning' in the winter semester of 2021/22. The seminar can be attended by students of the master program in economics (VWL), business (BWL) and Public Policy. Other faculties may apply but a successful participation cannot be guaranteed.

The seminar starts on the 11th October 2021 at 4 pm in the S1. The seminar will be weekly and will finish approximately 24th January 2022.

Registration for the seminar is possible from 1st September 2021 until 11th October 2021. For registering please send an email to Marius Puchalla. Note that you ALSO have to register for the seminar at the Examination Office. Participation in the seminar will not be possible without registration.

The topics covered in the course will be general machine learning methods comprising of **supervised machine learning**, **unsupervised machine learning** and **deep learning**. This includes topics such as classification, regression, resampling methods, tree-based methods and principal component analysis.

Further, selected topics will be included in the seminar which will help you to navigate yourself in the R space and in statistical programming in general.

To pass the seminar successfully, students have to hand in three programming problem sets. The submission deadlines of the three problemsets will be announced. Students must succeed both in handing in the programmed problem sets and sit for an exam. It is recommended that students participate in the course "Introduction to R"by Prof. Trede and have profound knowledge of econometrics.

The course is mainly based on the following book

An Introduction to Statistical Learning, 2nd Edition.

A free copy of the book is available at "https://www.statlearning.com/". Further, coding examples and further material can be obtained here.

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