



Jacobs Center Seminar Series

Prof. Dr. Carolin Strobl

University of Zurich, Department of Psychology



The “Botanical Garden” of Machine Learning - Understanding the Ideas behind Decision Trees and Random Forests

Classification and regression trees (also termed decision trees), model-based trees, bagging and random forests are powerful statistical methods from the field of machine learning. They have been shown to achieve a high prediction accuracy, especially in big data applications with many predictor variables and complex association patterns with nonlinear and interaction effects. However, while individual trees are easy to interpret, random forests are "black box" methods and their interpretation can be misleading. The aim of

this presentation is to introduce the rationale behind tree-based methods, to illustrate their potential for exploratory analyses in psychological research, but also to point out limitations and potential pitfalls in their practical application, as well as fairness issues in machine learning in general.

Friday, March 17, 2023, 10:15 h

Andreasstrasse 15, 8050 Zurich, AND 4.06