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MASTER'S THESIS PRESENTATION

Adaptive Data Analysis: A Theoretical and Empirical Overview

WHEN May, 6, 2021 3:30 PM, CDT

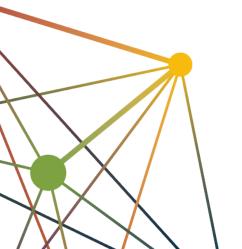
WHERE Via ZOOM

ZOOM information will be provided in the email announcement for this seminar.



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In order to ensure valid statistical conclusions, one would ideally select an analysis to be performed on a given dataset independently of the data themselves. However, this independence does not hold any longer when data are re-used across analyses and the analysis to be performed at a given step depends on the results of previous analyses. A typical example of such a situation occurs in Kaggle competitions, where a contestant may be repeatedly tuning their model until it achieves a desired predictive accuracy, all the while using the same training data which has a limited size. In this work, we aim to provide a deep insight into the state-of-the-art methods for preserving the validity of statistical conclusions when re-using data, focusing on the core theoretical frameworks, the experimental performance of these methods, as well as their limitations, and further research directions.



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