Beyond SGD: Efficient Learning with Non i.i.d. Data

Kfir Levy, a visiting professor from the Israel Institute of Technology, will deliver a talk on SGD optimization. Further information: https://kfiryehud.wixsite.com/kfir-y-levy

Abstract:
The tremendous success of the Machine Learning paradigm heavily relies on the development of powerful optimization methods. The canonical algorithm for training learning models is SGD (Stochastic Gradient Descent), yet this method has several limitations. In particular, it relies on the assumption that data points are i.i.d. (independent and identically distributed). Unfortunately, this assumption often fails to hold in practice.

In this talk, I will discuss an ongoing line of research where we develop alternative methods that resolve this limitation of SGD in two different contexts. Specifically, I will discuss a method that efficiently handles Markovian data, which is as efficient as SGD, and implicitly adapt to the underlying structure of the problem in a data-dependent manner.

Where: Technik / Seminarraum 2 (ICT-Gebäude)

Time: 10.08.2023 14:00-15:00