SORS: Machine Learning in Systems Biology: Now and Next

Abstract

For decades, bioinformatics has been concerned with gaining new knowledge from large data sets in the life sciences. Machine learning, often referred to as artificial intelligence, has enabled breakthroughs in bioinformatics in recent years that were previously difficult to imagine. In my talk, I will present the previous contributions and the plans of my lab at the interface of machine learning and bioinformatics. In particular, I will describe our efforts in learning on graphs and medical informatics, and how it influences our current work on protein bioinformatics.

Short Bio

Karsten Borgwardt is Director of the Department of Machine Learning and Systems Biology at the Max Planck Institute of Biochemistry in Martinsried, Germany since February 2023. Prior to that, he was full professor at ETH Zürich from 2017 to 2023. His work won several awards, including the 1 million Euro Krupp Award for Young Professors and a Starting Grant from the ERC-backup scheme of the Swiss National Science Foundation. Prof. Borgwardt has been leading large national and international research consortia, including the “Personalized Swiss Sepsis Study” (2018-2023) and the subsequent National Data Stream on infection-related outcomes in Swiss ICUs (2022-2023), and two Marie Curie Innovative Training Networks on Machine Learning in Medicine (2013-2016 and 2019-2022).

Speakers

Speaker: Prof. Dr. Karsten Borgwardt. Department of Machine Learning and Systems Biology, Max Planck Institute of Biochemistry
Host: Natasa Przulj. Leading researcher, Life Sciences Department, BSC
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