Title: Workshop: BayesFlow

Instructor(s): Stefan Radev

Abstract:

The goal of this workshop is to provide an introduction to the exciting world of Bayesian simulation-based inference using deep learning. It will start with two short and self-contained crash courses on Python and deep learning. Thus, previous exposure to deep learning with Python is a plus, but not a requirement. Afterwards, we will dive into the BayesFlow library, which we will use to build amortized Bayesian workflows. We will create custom neural networks capable of performing the crucial tasks of Bayesian estimation and model comparison. We will also employ state-of-the-art performance diagnostics for computational faithfulness. Finally, participants will be encouraged to bring their own models and attempt to integrate them into a BayesFlow pipeline.


Assignment: Active participation

Credits: 2 workshop days