TLΠ

Forschungspraxis, Master's Thesis

Analysis of Deep Neural Networks using Information Theory

The aim of this thesis is to take the recently introduced methods for explaining individual predictions of DNNs and adapt them to build statistical methods using information theoretic quantities that can help in understanding the internal functionality of the DNN. This can later be used to improve the performance of the DNN or to reduce the inference complexity by pruning the parts which do not play a significant role in the operation of DNN.

The work will consist of both theory and experimentation.

Prerequisites

- Basic knowledge information theory

- Basic knowledge of DNNs and their operation.

Advisors

Rana Amjad