



Prof. R. Wattenhofer

Deep Learning: Network- vs. Data-Structure

(Deep) Artificial Neural Networks (ANN) have become state of the art in many areas such as image recognition and machine translation. However, when it comes to designing the right architectures, practitioners heavily rely on experience, best-practices and heuristics.

In this thesis, we want to gain a better understanding of how the characteristics of a dataset relate to the (optimal) structure of an ANN that is trained on said data. We are interested in questions along the following line: How well/fast can an ANN trained to classify different dog-breeds be trained to distinguish cats? This also goes in the direction of transfer learning. We already have many ideas on how to approach this task. If this sounds interesting to you, do not hesitate to contact us so that we can have a chat.

Requirements: Interest in and willingness to study Machine Learning and Deep Learning. There will be weekly meetings to discuss progress and open questions.

Interested? Please contact us for more details!

Contacts

- Gino Brunner: gino.brunner@tik.ee.ethz.ch, ETZ G63
- Yuyi Wang: yuyi.wang@tik.ee.ethz.ch, ETZ 94

