

Bachelor's/Master's Thesis

Deep Learning with label uncertainty

Supervised learning with deep neural network architectures strongly relies on the reliability of the labelled training data set. In practice, the labelling experts are more confident in some points than in other ones. However, this known uncertainty is not yet incorporated in the learning procedure, even though it presents some useful information.

Tasks

You will implement a concept to incorporate given uncertainties to Deep Learning methods. The method should be evaluated on synthetic as well as on real data. One part of the topic is the definition of useful test cases and the synthesis/collection of suitable test data sets.

Qualification

- Interest in Machine Learning and Data Science
- Basic knowledge of training neural networks
- Motivation to work independently on a challenging problem
- Experience with Python and/or Keras is a plus

