Artificial neural networks

Assignment 2: Bayesian learning in neural networks

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1 Context

Bayesian statistics offer a robust framework in which it is possible to build and assess models, and perform inference.

In this exercise, we were asked to explore bayesian learning applied to neural networks. Using the Bayes rule in the context of learning has several desirable properties related to the fact that one is not using point estimates in the search space of solutions (for example the weight space) but tries to obtain a distribution over the weight space. Hence, quantification of certainty of predictions is possible without the use of validation set or resampling.

2 Simple perceptron

References