Lab 3: Laplace Approximation

CS 4921: Bayeian Methods for Neural Networks

27 January 2022

1. Create a Laplace approximation for a MAP neural network Gaussian prediction model with homoscedastic uncertainty for predicting the compressor decay coefficient using the 16 input features for Naval Propulsion dataset (http://archive.ics.uci.edu/ml/datasets/condition+based+maintenance+of+naval+propulsion+plant

2. Find the epistemic uncertainty for all examples.

3. Create a Laplace approximation for a MAP neural network Bernoulli prediction model for the ionosphere dataset.

4. Find the epistemic uncertainty for all ionosphere examples.