

Lab 4: Variational Inference with a Fully-Factorized Gaussian Variational Distribution

CS 4921: Bayesian Methods for Neural Networks

6 February 2023

1. Train a Bayesian neural network using variational inference, a fully-factorized Gaussian variational distribution, and a Gaussian prediction with heteroscedastic uncertainty for the Naval Propulsion dataset.
2. Find the epistemic uncertainty for all Naval Propulsion examples.
3. Train a Bayesian neural network using variational inference, a fully-factorized Gaussian variational distribution, and a Bernoulli prediction for the Ionosphere dataset.
4. Find the epistemic uncertainty for all Ionosphere examples.