

Tutorial 2: Model Selection for Multilayer Perception

Use the example in Section 4.3 (Concise Implementation of Multilayer Perceptions) to select the best models based on the validation performance considering the following options.

1. Learning rates: 0.001, 0.01, 0.05, 0.1, 0.2. For different learning rates, you may need to use different epochs.
2. Batch size: 128, 256, 512
3. Epoch number: 10, 20, 50
4. Activation function: linear, relu, sigmoid
5. Number of neurons: 128, 256, 512, 1024
6. Number of layers: add one more hidden layer with 128 neurons.
7. Initialization of the weights with different standard deviations: 0.01, 0.1, 1