Neural Networks

5. Multi Layer Perceptron (MLP) - classification

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Test set vs. train set

- we need to split the data into two parts - training, testing.
- random pick.
- training ≈ 80 % of the data.
- testing ≈ 20 % of the data.
- more advanced categorization: training, validation, testing.

Activation functions

- how to choose the activation function?
- trial and error :)
- hidden layer: sigmoid, tanh, relu, ...
- final layer: linear, sigmoid, softmax, ...

Classification vs. regression error

- classification error - percentage of misclassified data.
- regression error - squared distance between network's output and one-hot encoded target label.

Task

Complete missing parts of code in c05.py and classifier.py.

- c05.py - split the data into training set and testing set.
- classifier.py - fill in activation functions.
- classifier.py - create one_hot encodings (you can use utils.one_hot()) and compute classification and regression error.