Assignment 3: Neural Networks

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November 21, 2015

1 Implementation

In our second assignment, we apply neural networks to the emotion recognition problem. We use the Neural Network Toolbox provided by MATLAB to train and compare the performance of different neural networks on the dataset at our disposal, in order to find the best training algorithm along with the best parameter configuration.
We compare four different training algorithm:

- Standard gradient descent backpropagation (`traingd` in MATLAB);

- Gradient descent with adaptive learning rate (`traingda`);

- Gradient descent with momentum (`traingdm`)

- Resilient backpropagation (`trainrp`).

In this section we describe our implementation of:

- selection of the best set of parameters for each algorithm;

- evaluation of NN's performance on unseen data.

1.1 Parameter selection

1.2 Performance evaluation

2 Performance results

3 Questions