A Simple CUDA Neural Network

Kyle Salitrik, Tom T.

Abstract

This document contains the instructions for preparing a camera-ready manuscript for the proceedings of ACL-2015. The document itself conforms to its own specifications, and is therefore an example of what your manuscript should look like. These instructions should be used for both papers submitted for review and for final versions of accepted papers. Authors are asked to conform to all the directions reported in this document.

1 Credits

Images throughout section 3 were obtained from: neuralnetworksanddeeplearning.com/chap1.html

2 Introduction and Objectives

The following instructions are directed to authors of papers submitted to ACL-2015 or accepted for publication in its proceedings. All authors are required to adhere to these specifications. Authors are required to provide a Portable Document Format (PDF) version of their papers. **The proceedings are designed for printing on A4 paper.**

We will make more detailed instructions available at `http://acl2015.org/publication.html`. Please check this website regularly.

3 Neural Network Structure

With the purpose of reading handwritten digits 28x28 in size

The input to the neural network was a matrix of 28x28 reshaped into a single column vector of size 784. The structure for our neural network was as follows:

- Layer 1 (input): 784 neurons
- Layer 2 (hidden layer): 128 neurons
- Layer 3 (output): 10 neurons

4 Forward Propogation

5 Backward Propogation

6 Gradient Descent

7 Test and Validation

8 Performance

References

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