Project Proposal: Digits Classification using CNN

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I Introduction

In this project, we will research on classifying handwritten digits, a subtask under the field of Contextual Image Classification in Computer Vision. The task is provided by the famous Modified National Institute of Standard and Technology datasets [Y. LeCun, et al, 1998] (Hereinafter referred as *the MNIST dataset*). In the early days of machine learning, the dataset was widely used for benmarking various image processing systems. While the original datasets contains 60000 samples for training and 10000 samples for testing, our project uses only a fraction of them, which are 2000 samples for training and 2000 samples for testing. Additionally, the project will be tested on a hidden dataset at the end of submission deadline to determine the final performance. In the subsequent sections, we will describe our method for the task, the basic structure of the experiment, and the expected outcome.

II Methodology

III Experiment Plan

IV Expected Result

References

[Y. LeCun, et al, 1998] Y. LeCun, L. Bottou, Y. Bengio, and P. Haffner. "Gradient-based learning applied to document recognition." Proceedings of the IEEE, 86(11):2278-2324, November 1998.

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