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# TRAINING CONVOLUTIONAL NEURAL NETWORKS ON THE MNIST DATASET

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CS 4795 FINAL PROJECT REPORT

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## ABSTRACT

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## 1 Introduction

## 2 The problem

As we put more and more information on our computers, the need for paper is becoming somewhat obsolete. Even though we still use paper for some things today, it is often useful to have a digital copy of something in addition to the physical copy. This could be for communication purposes, for storage, or for backups, among other reasons. Having machines recognize handwritten documents is an important part of digitizing information.

## 3 Key idea

## 4 The details

This project was approached with multiple goals: to learn about convolutional neural networks, to learn various architectures of CNNs, and to use those architectures to train different CNNs on the MNIST dataset. The performance of the models was not of much concern, but it was still observed to understand the Three experiments were performed during the development of this project.

## 5 Related works

## 6 Conclusion

## 7 Citations

[1] [2] [3] [4] [5]

## References

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## **A Appendix**