DAT565/DIT407 Assignment 6

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This paper is addressing the assignment 3 study queries within the *Introduction to Data Science & AI* course, DIT407 at the University of Gothenburg and DAT565 at Chalmers. The main source of information for this project is derived from the lectures and Skiena [1]. Assignment 6 is about neural networks.

Problem 1: The dataset

Problem 2: Single hidden layer
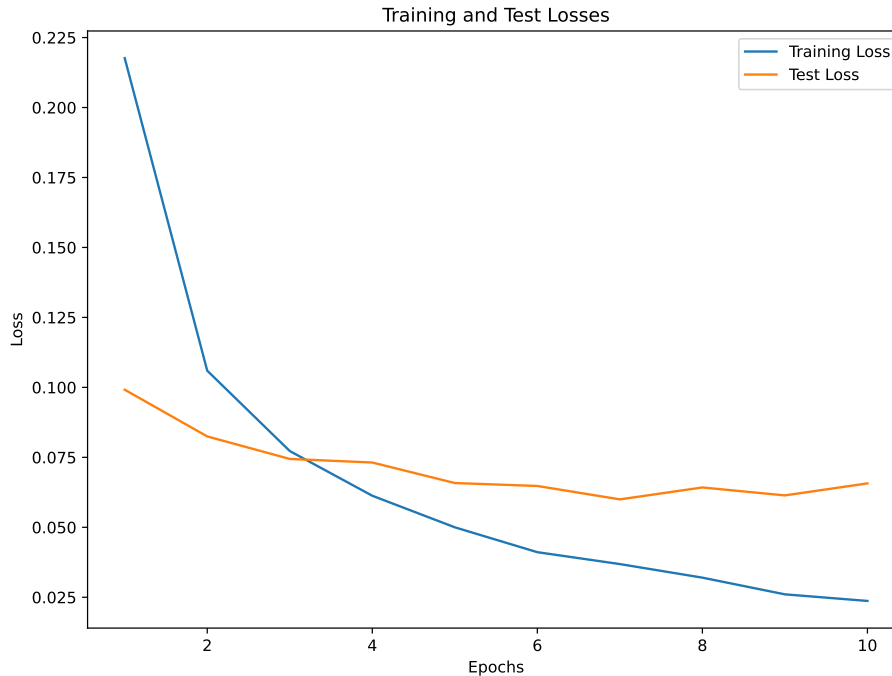
Accuracy for single hidden layer: 0.9794

Figure 1: Single hidden layer

Problem 3: Two hidden layers
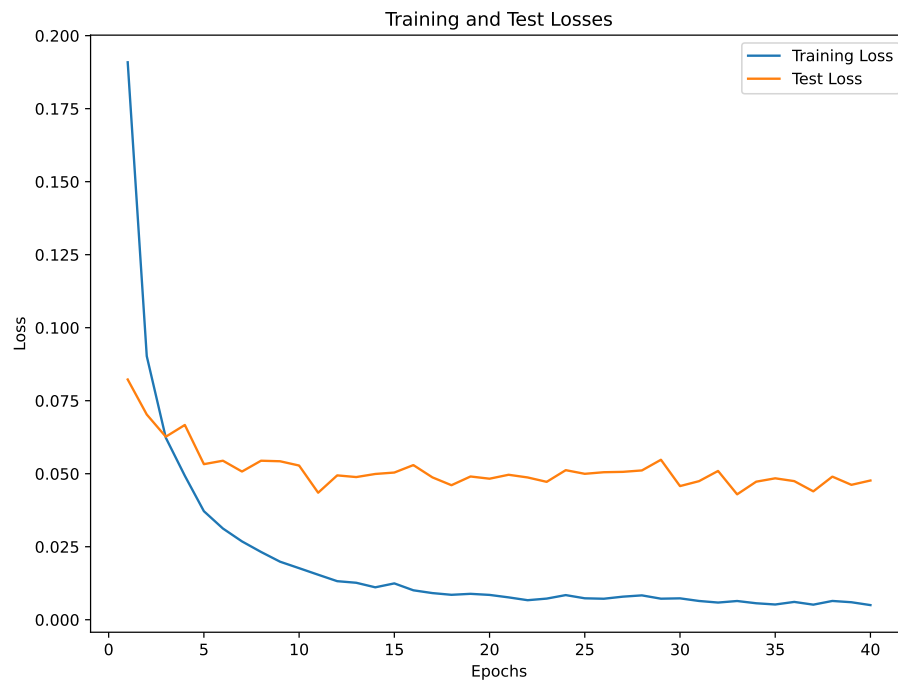
Accuracy for two hidden layers: 0.9855

Figure 2: Two hidden layers

Problem 4: Convolutional neural network
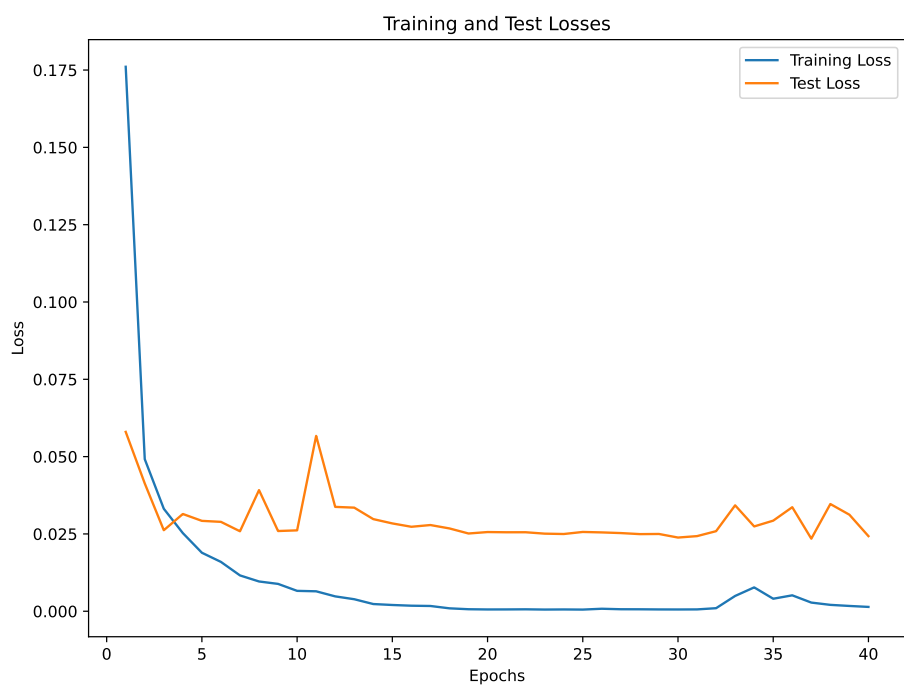
Accuracy for convolutional neural network: 0.9929

Figure 3: Convolutional neural network

References

[1] Steven S Skiena. *The Data Science Design Manual*. Retrieved 2024-01-20. 2024. URL: https://ebookcentral.proquest.com/lib/gu/detail.action?docID=6312797.

Appendix: Source Code