

# 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

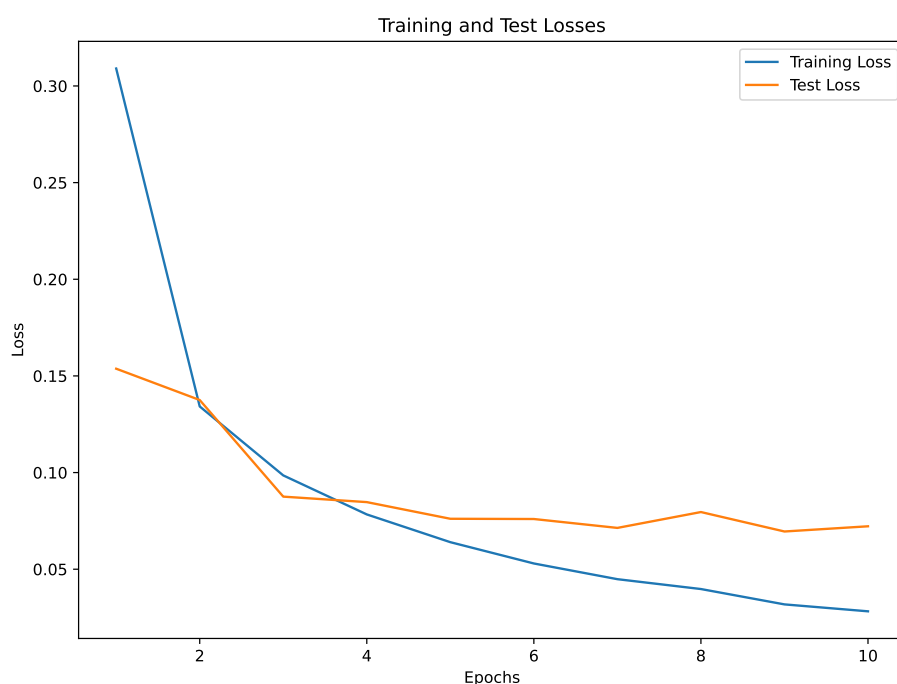


Figure 1: Single hidden layer

### Problem 3: Two hidden layers

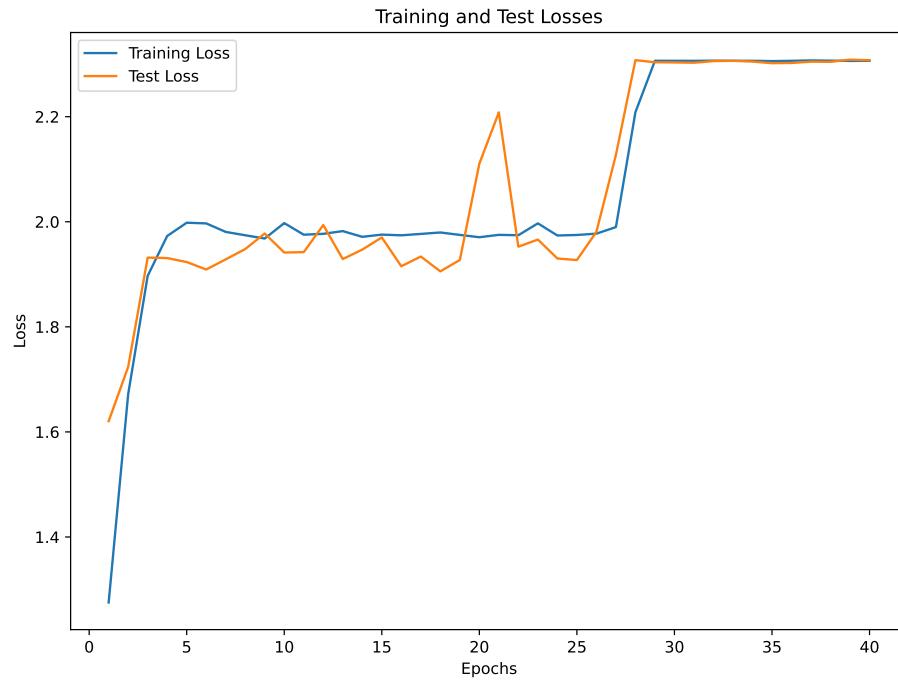


Figure 2: Two hidden layers

## Problem 4: Convolutional neural network

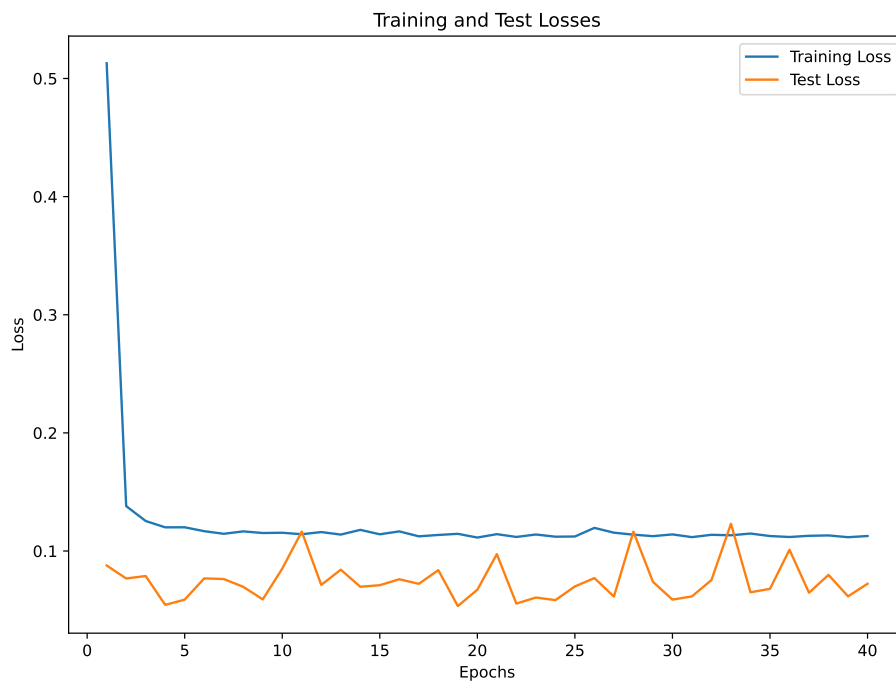


Figure 3: Convolutional neural network

## 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