Machine Learning in Natural Sciences
Spring 2025
Deep Learning Assignment
Report Part1

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For the task of predicting the sum of digits in the given image, we have used a standard CNN model as our baseline. We use a CNN, which consists of convolution filters. These convolution filters are passed over the image. The convoluted image is then passed to a dense feed forward network, where the final output is their sum.

We train it, using MSE as loss (making this a regression task), and the optimiser is Adam. We train it for 30 epochs.

We have made a “Training.ipynb” which initialises and trains the model. “Inference.ipynb” loads the trained model’s weights and performs inference. In order to use them, please change the paths of the data and the place where the model is stored.

Validation Accuracy came to be 0.16.