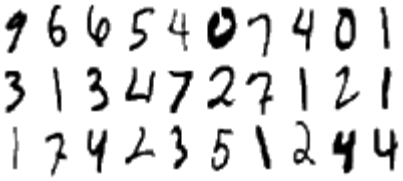
UNIVERSITÄT MANNHEIM

Data Mining II – Exercise 6: Neural Networks

1) Deep Learning in RapidMiner



In this exercise we are using the famous MNIST dataset for hand-written digit recognition. You can download the dataset in a RapidMiner-friendly format from kaggle: https://www.kaggle.com/c/digit-recognizer/data

As the labels are only available for the training set, use the split data operator to create a training and test set for this exercise.

Build a classification process for this dataset. Compare the deep learning operator to other classification approaches (for example, logistic regression, naïve bayes, SVM, etc.)

2) Deep Learning with Keras

Now we try to solve the same task with Keras, which allows us to use different network architectures, such as convolutional nets.

Follow the instructions in the slideset provided in ILIAS to first re-build the densely connected network that you used in RapidMiner, and then create a simple convolutional net.