

AI1035: Machine learning

Train a CNN on the SVHN_cropped benchmark such that approximately 90% accuracy are reached. You will need quite a deep CNN for this, you can experiment with ResNet-like architectures, BatchNorm and Dropout layers. Please perform the following steps:

- Use the *tensorflow_datasets* package to download the data directly into a *tf.data.Dataset*.
- Visualize a few samples from each class(using numpy and matplotlib), inspect the distribution of labels and the data ranges
- Use the *tf.data.Dataset* instance for training a model after having define a suitable layer structure