MAC0460/MAC5832 – EP5

Objectives: The aim of this EP is to

- Get familiarized with the Keras/Tensowflow library

- Practice use of deep neural networks applied to image classification

This EP is just for fun. It will not be included in the final grade computation.

A tutorial on Keras/Tensowflow library is available at https://www.tensorflow.org/guide/keras.

A good way to get started is just to replicate some of the examples there. You could try classification of the following image datasets that are easily available (I believe at least the two first are already integrated to the TF framework):

- MNIST

- Fashion MNIST

- KMNIST (Kuzushiji-MNIST)

You could train CNNs (convolutional neural nets), as well as traditional multi-leayer neural networks, and compare them.

To run the experiments, you can use Google Colab (which allows the use of GPUs in the cloud).

Another great resource to get familiarized with deep learning is the *Companion Jupyter notebooks for the book "Deep Learning with Python"*,
at https://github.com/fchollet/deep-learning-with-python-notebooks.

It has been updated recently with the addition of the second version (TF 2.x).