MEIC 2019/2020
Aprendizagem - Machine Learning
Homework IV
Deadline 30/05/2020
Submit on Fenix

Using Tensorflow/Keras as exemplified in practical lecture 9, explore the use of different neural network architectures to achieve the highest performance on the test set of the famous MNIST data set (http://yann.lecun.com/exdb/mnist/). More specifically:

- Explore the use of Feed-Forward and Convolutional Neural Networks
- Explore networks with a different number of hidden layers
- Assess the impact of different regularization methods

You must submit a report with a maximum of 2 pages, double column, including:

- **Working** link to a notebook on Colab with the code
- Description and explanation of the networks used in the experiments
- Description of the evaluation approach
- Presentation and discussion of the results
- The most important conclusions

You can find additional information regarding how to implement your networks in:

- Practical Lecture 9
- https://www.tensorflow.org/tutorials
- https://colab.research.google.com/github/tensorflow/docs/blob/master/site/en/tutorials/quickstart/beginner.ipynb