

# Assignment #1

Deadline: Sunday 1st of March

## Tasks

This assignment is an extension of the Binary MNIST exercise from week 1. In week 1 we only considered two digits: zeros and ones, but you are now going to extend the notebook to handle all digits from 0 to 9. You can use the notebook from the exercise as a template or you can implement it from scratch.

- 1) Extend theory section to cover all 10 digits 0-9
- 2) Extend the code to handle all digits.
- 3) Apply 10-fold cross validation to evaluate the method. Report and discuss the results
- 4) Compute and plot the confusion matrix. Discuss the result
- 5) Error analysis: find images that are misclassified by the system. Are there common characteristics among the images that are misclassified? Can you understand and explain why?