Machine Learning: SVM for Classification

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Instructions

You have to complete one Jupyter notebook:

- SVM on classification (digits images data - MNIST)

The notebook has missing code: need to fill in what is missing

You also need to write some text (to explain choices or describe results)

FIRST THING TO DO: you need to put your ID number in the notebook (as seed for random number generators).

IMPORTANT: code already there is a guideline, if you want to change or rewrite some/all of it go ahead, but make sure to answer all TO DOs!

Deadline

Submit your completed notebook:

- **deadline: Tuesday December 13th, 11:55 PM**
- **use link in elearning website**

Submit 1 file (the completed notebook for SVM on classification) - **Only submit your completed notebook!**

IMPORTANT: Use the following file name for the file that you have to submit:

- for the SVM classification notebook: SVM_FirstnameLastName_IDnumber.ipynb

Example: student Fabio Vandin, ID number 000001 will submit file:

- SVM_FabioVandin_000001.ipynb

WRONG FILE NAMES = 0 POINTS

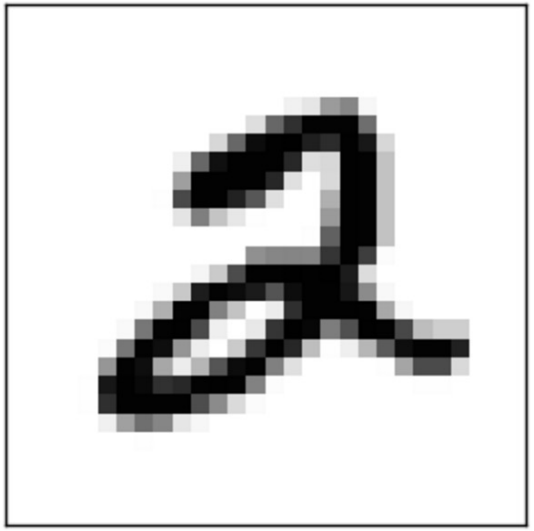
LATE SUBMISSION (e.g., email) = 0 POINTS

Dataset for SVM classification

MNIST dataset:

- http://yann.lecun.com/exdb/mnist/
- https://www.openml.org/d/554
- 70000 training instances, input =vector of 784 integer values in [0,…,255]= 28x28 matrix

INPUT:



TARGET/LABEL: 2