

## **Assignment 10**

1. Generate data and labels as in “codes/L10\_classification\_svm.py” for  $w = 0.4$  and  $w = 0.8$  (line 45). Divide data and labels in two halves (training and testing) and classify data using Linear Discriminant Analysis and Logistic Regression (from sklearn). Compare the results.
2. Generate labels as a continuous (not binary) signal and data (e.g., [http://scikit-learn.org/stable/auto\\_examples/svm/plot\\_svm\\_regression.html#sphx-glr-auto-examples-svm-plot-svm-regression-py](http://scikit-learn.org/stable/auto_examples/svm/plot_svm_regression.html#sphx-glr-auto-examples-svm-plot-svm-regression-py)). Fit the data using Linear Regression and linear Support Vector Regression (from sklearn). Compare the results.
3. Write a report about the tasks (4 pages max) including figures.

Save the report to a file (A10\_your\_surname.pdf) and upload it together with your Python script (A10\_your\_surname.py) to the assignment webpage. The \*.pdf and \*.py files can be zipped and uploaded as a single zip file (A10\_your\_surname.zip).