=> Machine Learning Assignment 2 <=
50 MARKS

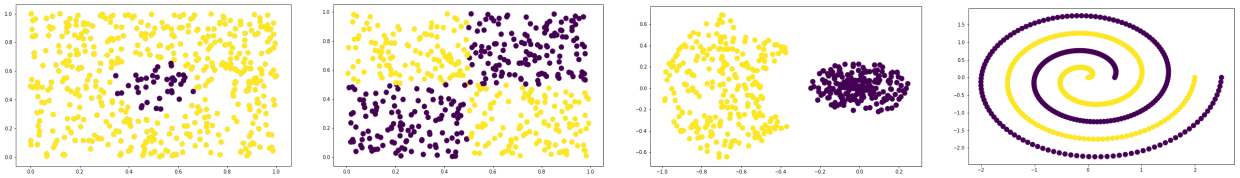
If you have any problems with this practical assignment, speak up well before the deadline!

Deadline

Submit to Dane Brown's Rhodes email address, by **2pm** on **Monday 20 May 2019**. Ask me for the VM if your setup is not working. Using the VM asap would be to your advantage for the June exam.

Task 1: Which Kernel Works Best for SVM? [25 Marks]

The code provided in `SVM_Exercises.py` includes four different sets of data and visualization code, which you should display as shown below. Complete the code by using the SVM kernel which will perform best in terms of accuracy on the data given in the code. The result per dataset should print the accuracy score of the SVM model.



Task 2: Tuning SVM Parameters and Cross-Validation [25 Marks]

Remember the lecture? Perform parameter estimation on the polynomial kernel and sigmoid kernel using grid search with cross-validation for best recall. The above process must be performed on the LFW dataset, included in scikit-learn. Also perform the following:

- Display the results of the best parameter values
- Verbose the grid scores (like in `9_SVM_Grid_Search_CV.py`).
- Display a classification report and the accuracy score