MLND classification lab project rubric

Project Rubric

Students: this short document describes what we hope - at a high level - you get out of the introductory Jupyter project notebook contained in this directory. For more granular instructions please see the notebook itself.

Learning objectives:

Students following the instructions in the notebook will tinker with parameters and settings of various machine learning algorithms to get an intuitive feel for how these settings affect the classification learning process, as well as final results. By playing around students can see immediately the results of these changes and in particular how a poor choice of model parameter leads to poor quality predictions.

Data exploration and Algorithms:

Using several toy datasets students tinker with the parameter settings for a kernelized SVM ('C' and 'gamma' for the nonlinear version), decision trees ('max_depth'), and neural network (hidden_layer_sizes') to find good fitting values, as well as for values that underfit or overfit the data. In each case a poor choice of parameter leads to either underfitting or overfitting of the given model (see this notebook for further explanation of these two terms).