

Homework 5

Posted: November 30th, 2016

Due: November December 7, 2016

Consider the sample $S = \{(\mathbf{x}_i, y_i) \mid 1 \leq i \leq 20\}$ of points \mathbf{x}_i in \mathbb{R}^2 as shown in the Figure 1.

Using at least four distinct kernels in the **kernlab** R package determine a support vector machine classifier.

Graph total time needed to compute the classifier as a function of the error of each of the classifiers.

Note: to determine the time used to compute the classifier you can use

```
ptm <- proc.time();
```

computation of the SVM

```
proc.time() - ptm;
```

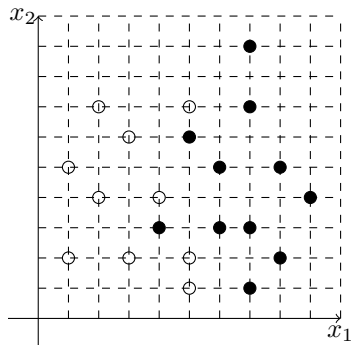


Figure 1: Sets of 20 points in \mathbb{R}^2