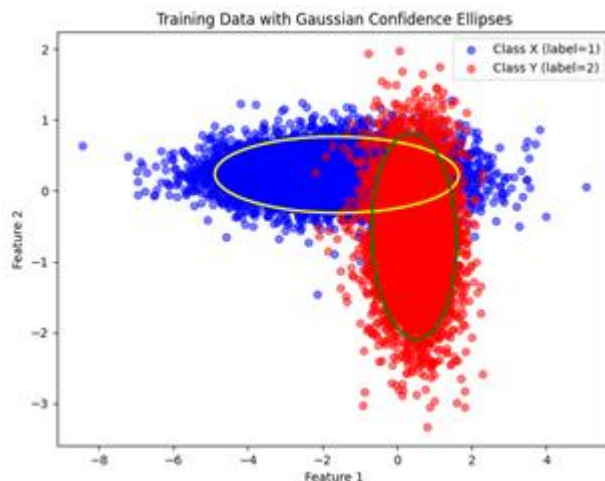


The data plotted



- a) classify instances in `tst_xy`, and use the corresponding label file `tst_xy_class` to calculate the accuracy;

Accuracy on `tst_xy`: 90.92%

Using class frequency priors, it gives a solid performance with an accuracy of 90.92%

- b) classify instances in `tst_xy_126` by assuming a uniform prior over the space of hypotheses, and use the corresponding label file `tst_xy_126_class` to calculate the accuracy;

Accuracy using uniform prior: 88.82%

Using uniform priors gives a good base accuracy for the dataset without true knowledge of the class distribution of the dataset.

- c) classify instances in `tst_xy_126` by assuming a prior probability of 0.9 for Class x and 0.1 for Class y, and use the corresponding label file `tst_xy_126_class` to calculate the accuracy; compare the results with those of (b)

Accuracy using non-uniform prior: 96.27%

Absolute improvement in accuracy: 8.39%

Non uniform accuracy with a strong prior increases the performance which shows prior knowledge is useful. Changing the priors (increasing or decreasing either) results in a lower accuracy. This suggests that the values of 0.9 and 0.1 is close to the true class distribution of the data set.