

MACHINE LEARNING

ASSIGNMENT-2

- 1-a. The number of support vectors obtained = 598.
 $0.001 < \alpha < 0.95$.
The variable SV contains the list of support vectors obtained.
- 1-b. The average accuracy obtained = 98.4596.
The intercept term $b = -1.5654$.
The 'w' vector is 1558x1 in variable list.
- 1-c. The number of support vectors obtained = 937.
 $0.001 < \alpha < 0.95$.
The obtained accuracy = 98.0745.
The list of support vectors are in variable SVk.
- 1-d. The accuracies obtained for linear kernel = 98.2028, SV = 319
gaussian kernel = 98.7163, SV = 646.
- 2-a. — — —
- 2-b. The stopping criterion considered is
 $J_{Teta} > 10^{-10}$ && count < 35000.
- 2-c. The accuracies vary due to randomised initialisations.
The maximum accuracy observed = 98.2359
and the average is around 98%.
The time taken for this accuracy = around 7 min.
- 2-d. The number of output units required = 10.
The max. accuracy observed = 94.39
average accuracy varies around 94%
The time taken is around 30 min.
Yes there is a huge difference in the running times in both the cases.