

The random.seed(10) is setted for shuffle for easier debugging
The program may cost about 1 min to run.

Linear kernel:

C = 0.05

EPS = 0.01

MAXITER = 5000

KERNEL = 'linear'

Number of support vectors for linear kernel: 162

Validation accuracy: 0.719

Test accuracy: 0.687

w is $\begin{bmatrix} -0.827 & 0.714 & -1.461 & \dots & -0.079 & -0.123 & -0.01 \end{bmatrix}$

b is 0.026

Gaussian kernel:

C = 20

EPS = 0.01

MAXITER = 100

KERNEL = 'gaussian'

Number of support vectors for gaussian kernel: 1209

KERNEL_PARAM = 25

Validation accuracy: 0.723

Test accuracy: 0.710