

Q2(a)

$\sigma = 0.1$ 1 10 100 1000

C =

gamma =

1

accuracy_list =

1.0000 0.9970 0.8929 0.8690 0.8631

gamma =

10

accuracy_list =

1.0000 1.0000 0.9613 0.8750 0.8512

gamma =

100

accuracy_list =

1.0000 1.0000 0.9821 0.8810 0.8631

gamma =

1000

accuracy_list =

1.0000 1.0000 0.9940 0.8988 0.8839

gamma =

10000

accuracy_list =

1.0000 1.0000 1.0000 0.9196 0.8899

gamma =

100000

accuracy_list =

1.0000 1.0000 1.0000 0.9405 0.8929

gamma =

1000000

accuracy_list =

1.0000 1.0000 1.0000 0.9792 0.9018

gamma =

10000000

accuracy_list =

1.0000 1.0000 1.0000 0.9970 0.9435

gamma =

100000000

accuracy_list =

1.0000 1.0000 1.0000 1.0000 0.9643

bestgamma =

1

```
bestgamma =  
1  
bestsigma =  
0.1000
```

Q2(c)

```
gamma =  
1  
accuracy_list =  
0.6000 0.5882 0.8941 0.8824 0.8706  
gamma =  
10  
accuracy_list =  
0.6000 0.5882 0.8706 0.8941 0.8706  
gamma =  
100  
accuracy_list =  
0.6000 0.5882 0.8824 0.9059 0.8706  
gamma =  
1000  
accuracy_list =  
0.6000 0.5882 0.8706 0.9176 0.9059  
gamma =  
10000  
accuracy_list =  
0.6000 0.5882 0.8471 0.9412 0.9059  
gamma =  
100000  
accuracy_list =  
0.6000 0.5882 0.8471 0.9529 0.9059  
gamma =  
1000000  
accuracy_list =  
0.6000 0.5882 0.8471 0.8941 0.9176  
gamma =  
10000000
```

best
accuracy

```
accuracy_list =  
    0.6000  0.5882  0.8471  0.8824  0.9294  
gamma =  
    100000000  
accuracy_list =  
    0.6000  0.5882  0.8471  0.8588  0.9294  
bestgamma =  
    100000  
bestsigma =  
    100
```

2(d) $\gamma = C = 100000$
 $\sigma = 100$
accuracy_list =
0.7905