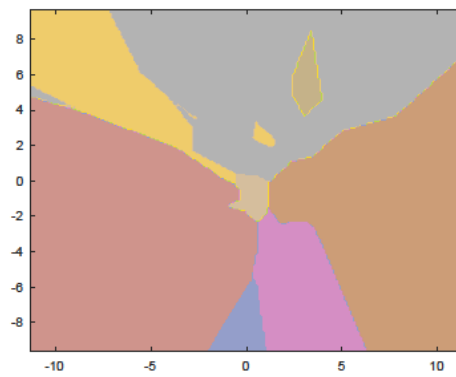


Task 2.1

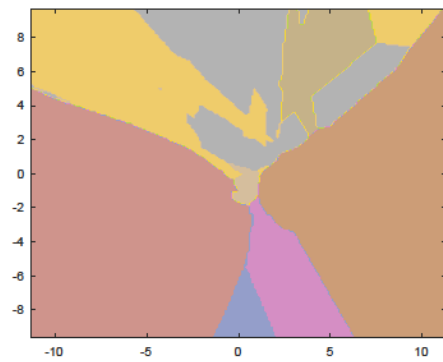
k	N	Nerrs	acc	time(s)
1	3986	1.4700e+02	9.6312e-01	5.7931
3	3986	1.2900e+02	9.6763e-01	5.9204
5	3986	1.2900e+02	9.6838e-01	5.8378
10	3986	1.2600e+02	9.6113e-01	5.8566
20	3986	1.5500e+02	9.5910e-01	5.8909

Task 2.2

We chose a subset of X_{trn} of the first 2000 samples.

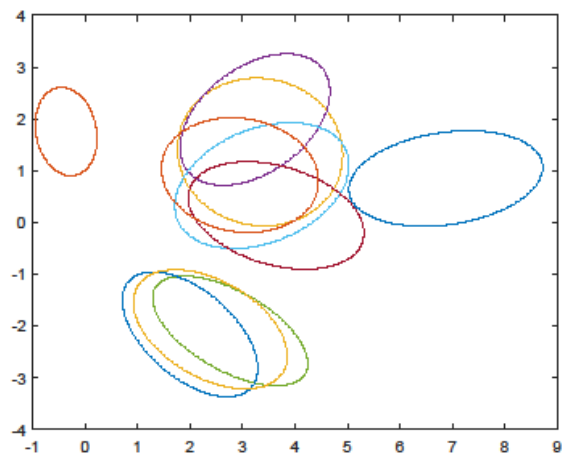


$k = 1$



$$k = 3$$

Task 2.3



Task 2.4

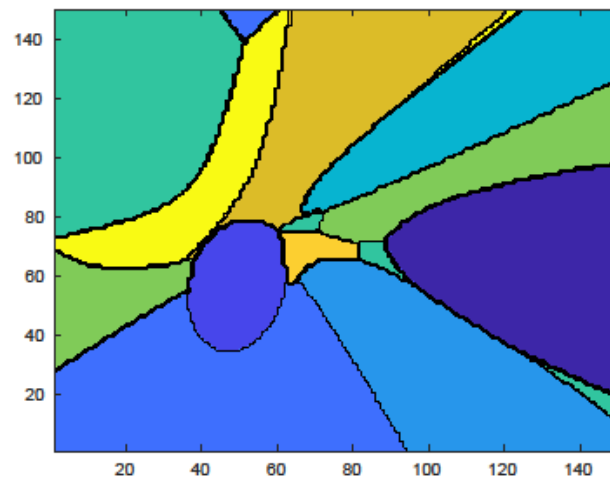
A table that shows the correlation for each class $k = 1, \dots, 10$, and the one for the all.

1	0.2315
2	-0.1507
3	-0.0447
4	0.4261
5	-0.5975
6	0.3244
7	-0.3323
8	-0.5514
9	-0.1076
10	-0.4548
all	-7.3185e-17

Task 2.5

N	3986
Nerrs	2.1300e+02
acc	9.4656e-01
time(s)	3.0880

Task 2.6



Task 2.7

ratio	acc
0.9	0.9476
0.8	0.9468
0.7	0.9473
0.6	0.9456
0.5	0.9476
0.4	0.9453
0.3	0.9468