Supplementary

1. Result for task 1

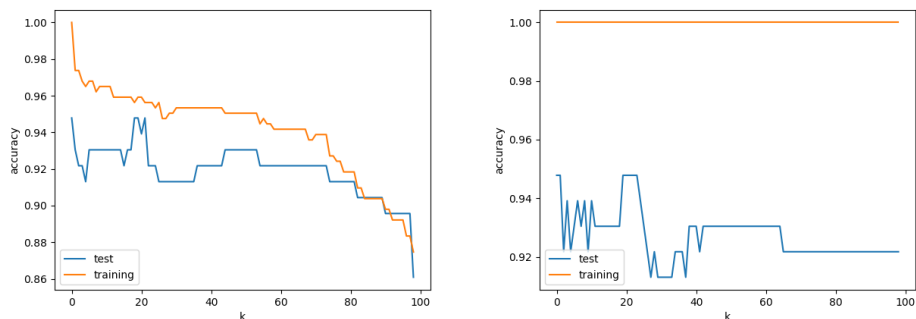

Fig.1 left: metric = uniform, right: metric = distance

Time/s	uniform	distance
Brute-force	3.344821	3.373387.
KD-tree	3.393226	3.255498
Ball Tree	3.464017	3.507878

Table 1. result on different algorithms

2. Result for task 2

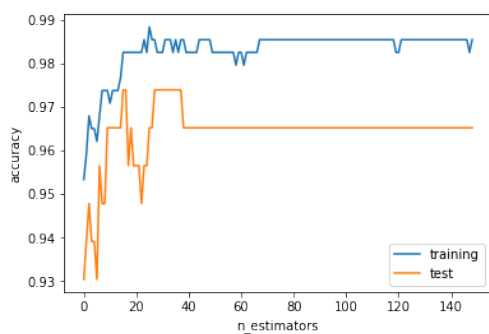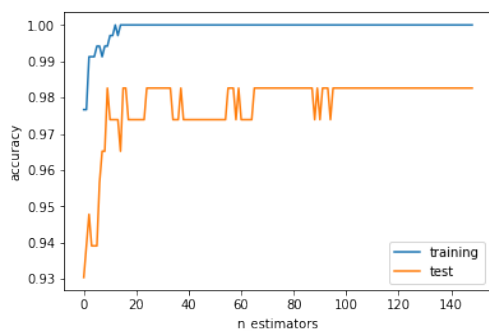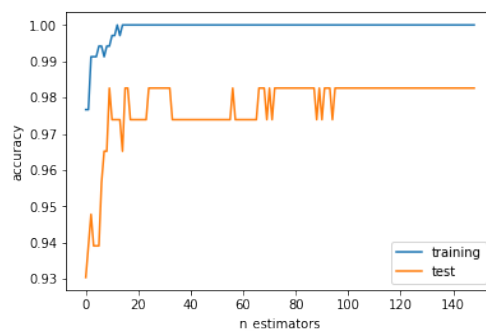|	criterion	Max_depth	min_impurity_decrease	bootstrap	result
1	entropy	None	0	True	(a)
2	gini	None	0	True	(b)
3	entropy	2	0	True	(c)
4	entropy	5	0	True	(d)
5	entropy	8	0	True	(e)
6	entropy	10	0	True	(f)
7	entropy	2	0	False	(g)
8	entropy	5	0	False	(h)
9	entropy	8	0	False	(i)
10	entropy	8	0.1	True	(j)
11	entropy	8	0.05	True	(k)
12	entropy	8	0.01	True	(l)

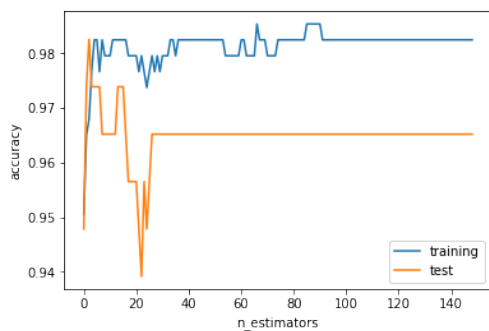Table 2. experiment setting for task 2

(a)

(b)
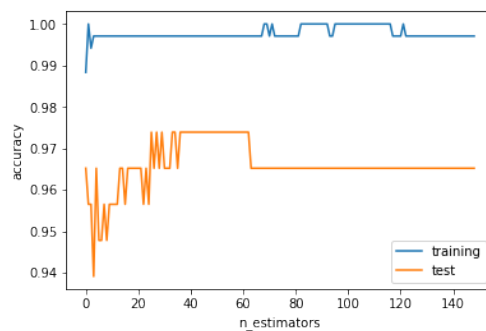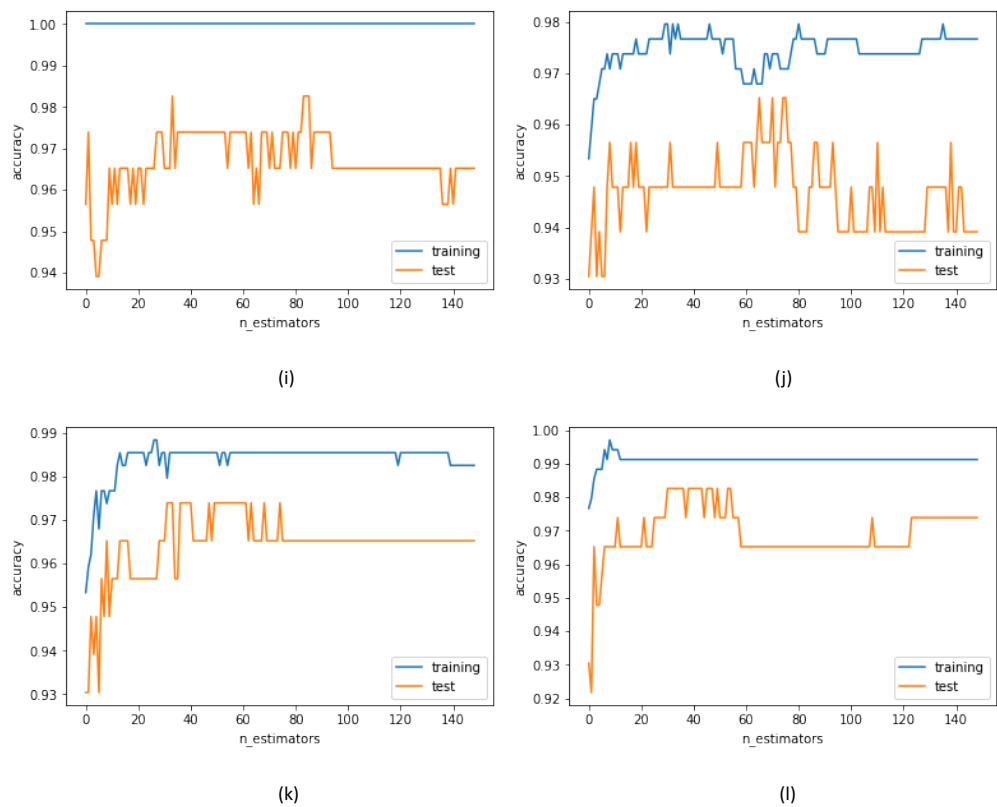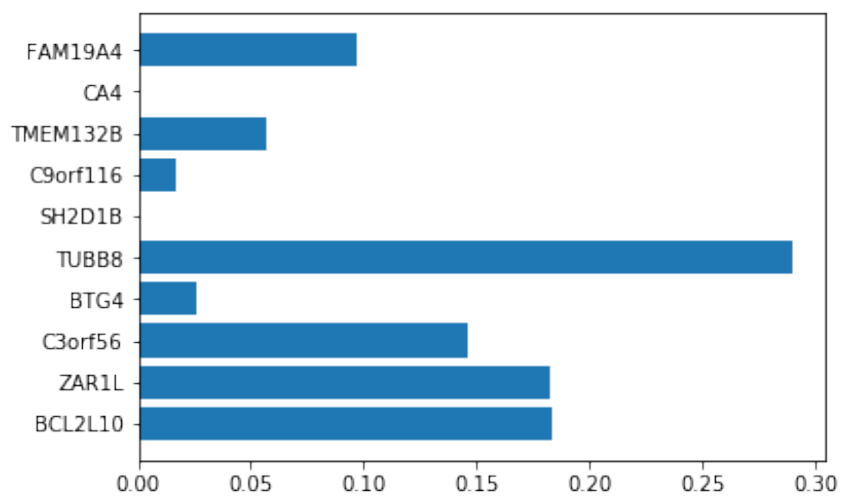
(c)

(d)

(e)

(f)

(g)

(h)

(i)

(j)

(k)

(l)
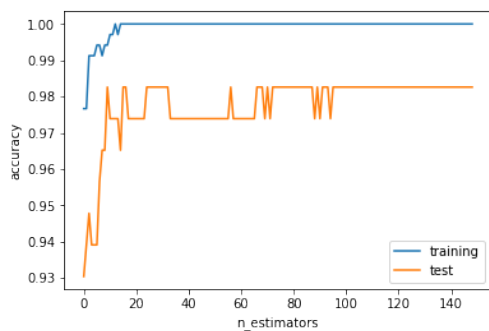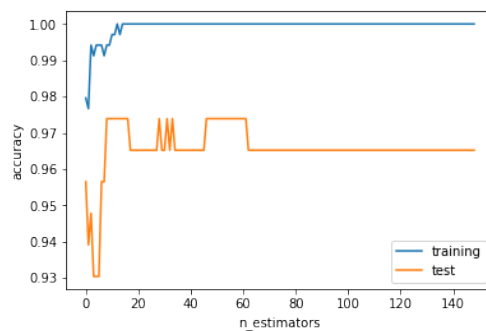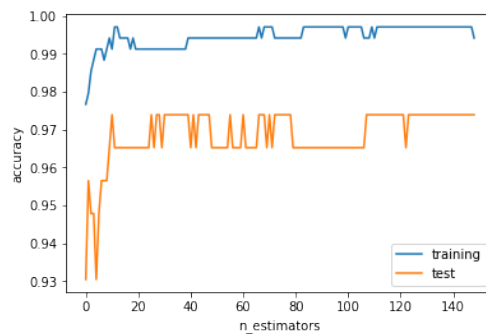
Fig.2 Result for task 2

Fig.3 relative feature importance