Report

a) Performance of Bagging algorithm.

Confusion Matrix Our Algo

Depth : 3 stump_count: 10

	0	1
0	1130	57
1	29	815

Depth : 3 stump_count: 20

	0	1
0	1130	57
1	29	815

Depth : 5 stump_count: 10

	0	1
0	1183	4
1	0	844

Depth : 5 stump_count: 20

	0	1
0	1183	4
1	0	844
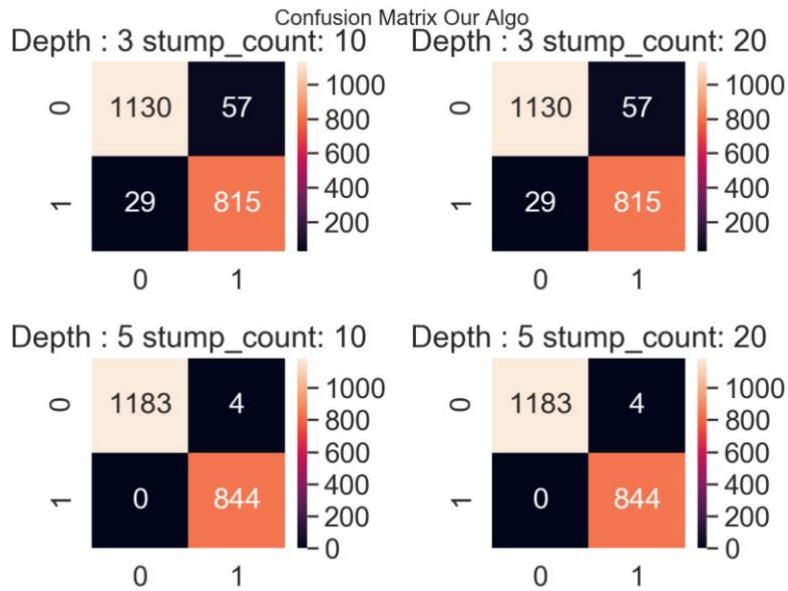
b) Performance of Boosting algorithm

Confusion Matrix Our Algo

Depth : 1 stump_count: 20

	0	1
0	1130	57
1	4	840

Depth : 1 stump_count: 40

	0	1
0	1154	33
1	4	840

Depth : 2 stump_count: 20

	0	1
0	1187	0
1	4	840

Depth : 2 stump_count: 40

	0	1
0	1187	0
1	0	844
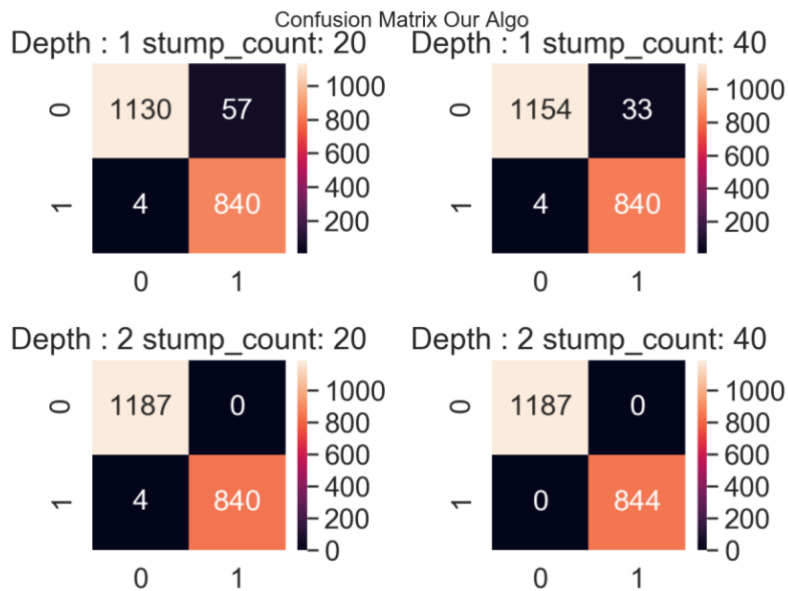
c) Performance of Scikit-Learn Bagging algorithm

Confusion Matrix (Sklearn)
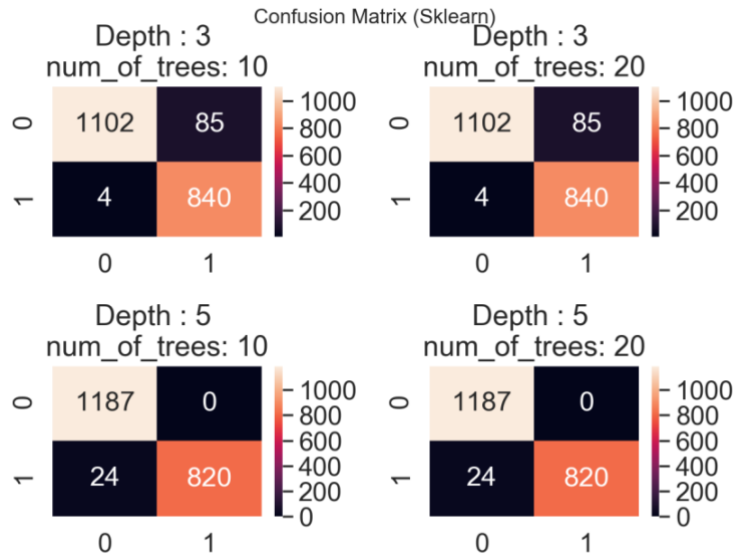
In the case of **Bagging**, both our algorithm and Scikit performed in a similar manner such that only depth of decision tree resulted in a change in accuracy and number of trees had no effect. Accuracy was also comparable, both resulting in 98-99% test accuracy. The only noticeable drawback of our algorithm was that it was slightly slower.

In the case of **Boosting**, both Scikit and our algorithm gave 100% test accuracy in the case of 40 trees of depth 2. Again, our algorithm was slightly slower.

d) Performance of Scikit-Learn Boosting algorithm

Confusion Matrix (Sklearn)