(Assessment 1)

Mithlesh

DOMS | Page No.
Date / /

1) B
2) B
3) C
4) C
5) B
6) C
7) B
8) C
9) B
10) C

→ Overfitting in decision tree :- A ~~tree is~~ Decision tree is overfit when its ~~depth~~ max depth is to high. A tree is grows in only one condition when the classify the every point accurately.

→ Bagging & Random forest :-

→ Bagging :- It reduce overfitting by training multiple trees on different subsets of data and averaging their result

→ Random forest :- It is machine learning algorithm which predicts the input results by splitting a data into multiple trees and then selecting in the end one.

→ A fraud detection :- 0.92%.

Acc = $\frac{TP + TN}{Total}$. $\frac{120 + 800}{1000} = \frac{920}{1000} =$

Precision = $\frac{TP}{TP + FP}$ = $\frac{120}{120 + 50} = \frac{120}{170} = 0.70$

Recall = $\frac{TP}{TP + FN}$ = $\frac{120}{120 + 30}$ = $\frac{120}{150} = 0.8$

f1 Score = $\frac{Prec. \cdot Recall}{Prec + Recall} = \frac{0.70 \times 0.8}{0.70 + 0.8} = \frac{0.56}{1.5} =$ 0.37

→ Accuracy :- 0.92% = 92%.

→ Precision :- 0.70% = 70%.

→ Recall :- 0.70% = 80%.

→ f1_Score :- 0.37% = 37%.

(a) if max_features = None?

→ In this condition model stops being 'random' is spits split split the all features at every split. It is restructuring the every feature of the data.

(c) n_estimators = 200 :- It means to model will be grown a maximum 200 trees in given data sets for finding the better results.