MACHINE LEARNING_4

1. C
2. B
3. A
4. A
5. B
6. B
7. D
8. B
9. A,B and D
10. A and D
11. Outliers are data points that are far from other data points. In other words, they're unusual values in a dataset. The interquartile range (IQR) measures the spread of the middle half of your data. It is the range for the middle 50% of your sample. Use the IQR to assess the variability where most of your values lie. Larger values indicate that the central portion of your data spread out further.
    IQR = Q3 – Q1
12. Bagging is a technique for reducing prediction variance by producing additional data for training from a dataset by combining repetitions with combinations to create multi-sets of the original data. Boosting is an iterative strategy for adjusting an observation's weight based on the previous classification.
13. Adjusted R squared is calculated by dividing the residual mean square error by the total mean square error (which is the sample variance of the target field). The result is then subtracted from 1. Adjusted R2 is always less than or equal to R2.
    R2= TSS-RSS/TSS = 1 – RSS/TSS
14. In Normalisation, the change in values is that they are at a standard scale without distorting the differences in the values. Whereas, Standardisation assumes that the dataset is in Gaussian distribution and measures the variable at different scales, making all the variables equally contribute to the analysis.
15. Cross Validation drastically increases the training time. Earlier you had to train your model only on one training set, but with Cross Validation you have to train your model on multiple training sets.
    Cross-Validation is a very powerful tool. It helps us better use our data, and it gives us much more information about our algorithm performance.
    The disadvantage of this method is that the training algorithm has to be rerun from scratch k times, which means it takes k times as much computation to make an evaluation. A variant of this method is to randomly divide the data into a test and training set k different times