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Q1. What is the KNN algorithm?
Ans -1 The k-nearest neighbors algorithm, also known as KNN or k-NN, is a
non-parametric, supervised learning classifier, which uses proximity to make
classifications or predictions about the grouping of an individual data point

Q2. How do you choose the value of K in KNN?
Ans The optimal K value usually found is the square root of N, where N is the
total number of samples. Use an error plot or accuracy plot to find the most
favorable K value. KNN performs well with multi-label classes, but you must be
aware of the outliers


Q3. What is the difference between KNN classifier and KNN regressor?
Ans -3 the difference between the knn classifier and knn regressor is that
in classification data set are in distinct in nature and in the classification
new data is assign to those group who have higher vote in k where in the regre
new data point is assign on the base of average of k value

Q4. How do you measure the performance of KNN?
1. Evaluation procedure 1 - Train and test on the entire dataset
a) Train the model on the entire dataset.
b) Test the model on the same dataset, and evaluate how well we did by
comparing the predicted response values with the true response values.


Q5. What is the curse of dimensionality in KNN?
Ans -5 curse of dimensionality means to that dimensionality due to add model
accuracy get decrease because it is less corellated to target value

Q6. How do you handle missing values in KNN?
Ans 6-The idea in kNN methods is to identify 'k' samples in the dataset that
are similar or close in the space. Then we use these 'k' samples to estimate
the value of the missing data points. Each sample's missing values are imputed
using the mean value of the 'k'-neighbors found in the dataset

Q7. Compare and contrast the performance of the KNN classifier and regressor.
Which one is better for which type of problem?
Ans -7  when we have continous type of data so on that time regressor will use
and when we have categorical kind of data so we used the classification

Q9. What is the difference between Euclidean distance and Manhattan distance i
Ans -euclidean distance is the calculate the minimum short distance between
two point without any way blocking where the manhattan is calculated with mini
distance between point with blockage


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