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* Required

Quiz I

All Questions are Compulsory

How do you choose the right node while constructing a decision tree? *

- (A) An attribute having high entropy
- (B) An attribute having high entropy and information gain
- (C) An attribute having the lowest information gain.
- (D) An attribute having the highest information gain.

Support vectors are the data points that lie closest to the decision surface. *

- A) TRUE
- B) FALSE

Which of the following statement is TRUE? *

- (A) Outliers should be identified and removed always from a dataset.
- (B) Outliers can never be present in the testing dataset.
- (C) Outliers is a data point that is significantly close to other data points.
- (D) The nature of our business problem determines how outliers are used.

Which one of the following statements is TRUE for a Decision Tree? *

- (A) Decision tree is only suitable for the classification problem statement.
- (B) In a decision tree, the entropy of a node decreases as we go down a decision tree.
- (C) In a decision tree, entropy determines purity.
- (D) Decision tree can only be used for only numeric valued and continuous attributes.

For Lasso Regression, if the regularization parameter = 0, what does it mean? *

- (A) The loss function is as same as the ordinary least square loss function
- (B) Can be used to select important features of a dataset
- (C) Shrinks the coefficients of less important features to exactly 0
- (D) All of the above

The effectiveness of an SVM depends upon: *

- A) Selection of Kernel
- B) Kernel Parameters
- C) Soft Margin Parameter C
- D) All of the above

In the Naive Bayes algorithm, suppose that prior for class w1 is greater than class w2, would the decision boundary shift towards the region R1(region for deciding w1) or towards region R2(region for deciding w2)? *

- (A) towards region R1.
- (B) towards region R2.
- (C) No shift in decision boundary.
- (D) It depends on the exact value of priors.

How do we perform Bayesian classification when some features are missing? *

- (A) We assuming the missing values as the mean of all values.
- (B) We ignore the missing features.
- (C) We integrate the posteriors probabilities over the missing features.
- (D) Drop the features completely.

Which of the following statements is FALSE about Ridge and Lasso Regression? *

- (A) These are types of regularization methods to solve the overfitting problem.
- (B) Lasso Regression is a type of regularization method.
- (C) Ridge regression shrinks the coefficient to a lower value.
- (D) Ridge regression lowers some coefficients to a zero value.

The cost parameter in the SVM means: *

- A) The number of cross-validations to be made
- B) The kernel to be used
- C) The tradeoff between misclassification and simplicity of the model
- D) None of the above

Decision trees are also known as CART. What is CART? *

- (A) Classification and Regression Trees
- (B) Customer Analysis and Research Tool
- (C) Communication Access Real-time Translation
- (D) Computerized Automatic Rating Technique

What's the penalty term for the Ridge regression? *

- (A) the square of the magnitude of the coefficients
- (B) the square root of the magnitude of the coefficients
- (C) the absolute sum of the coefficients
- (D) the sum of the coefficients

What do you mean by generalization error in terms of the SVM? *

- A) How far the hyperplane is from the support vectors
- B) How accurately the SVM can predict outcomes for unseen data
- C) The threshold amount of error in an SVM
- (D) None of the Above

For Ridge Regression, if the regularization parameter = 0, what does it mean? *

- (A) Large coefficients are not penalized
- (B) Overfitting problems are not accounted for
- (C) The loss function is as same as the ordinary least square loss function
- (D) All of the above

Which of the following statement is TRUE about the Bayes classifier? *

- (A) Bayes classifier works on the Bayes theorem of probability.
- (B) Bayes classifier is an unsupervised learning algorithm.
- (C) Bayes classifier is also known as maximum apriori classifier.
- (D) It assumes the independence between the independent variables or features.

_____ refers to a model that can neither model the training data nor generalize to new data. *

- (A) good fitting
- (B) overfitting
- (C) underfitting
- (D) all of the above

What's the penalty term for the Lasso regression? *

- (A) the square of the magnitude of the coefficients
- (B) the square root of the magnitude of the coefficients
- (C) the absolute sum of the coefficients
- (D) the sum of the coefficients

Decision tree learners may create biased trees if some classes dominate. What's the solution of it? *

- (A) balance the dataset prior to fitting
- (B) imbalance the dataset prior to fitting
- (C) balance the dataset after fitting
- (D) No solution possible

In a naive Bayes algorithm, when an attribute value in the testing record has no example in the training set, then the entire posterior probability will be zero. *

- (A) True
- (B) False
- (C) Can't determined
- (D) None of these.

The SVM's are less effective when: *

- ○ A) The data is linearly separable
- ○ B) The data is clean and ready to use
- ◉ C) The data is noisy and contains overlapping points
- ○ D) None of the Above

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