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Data Science AI/ML

Dashboard / My courses / aiml / Day-18: Final Exam / Final Test

Previous Activity

Started on	Thursday, 1 August 2019, 7:10 PM
State	Finished
Completed on	Thursday, 1 August 2019, 8:05 PM
Time taken	55 mins 36 secs
Marks	21.00/45.00
Grade	**14.00** out of 30.00 (**47**%)

Question **1**

Complete

Mark 0.00 out of 1.00

A and B are two events. If P (A, B) decreases while P(A) increases, what must be true:

Select one:

- a. P(B) decreases
- b. P(B|A) decreases
- c. All of above
- d. P(A|B) decreases

Question **2**

Complete

Mark 1.00 out of 1.00

A table with all possible value of a random variable and its corresponding probabilities is called

Select one:

- a. Cumulative distribution function
- b. Probability Distribution
- c. Probability Mass Function
- d. Probability Density Function

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Complete

Mark 0.00 out of 1.00

is

Select one:

- a. Multicollinearity
- b. None of the above
- c. Correlation
- d. Regression

Question **4**

Complete

Mark 1.00 out of 1.00

According to Central Limit theorem, the standard deviation of the sampling distribution of the sample means is equal to the population standard deviation divided by the square root of the sample size .

Select one:

- a. False
- b. True

Question **5**

Complete

Mark 0.00 out of 1.00

Adding more basis functions in a linear model... (pick the most probable option)

Select one:

- a. Doesn't affect bias and variance
- b. Decreases model bias
- c. Decreases estimation bias
- d. Decreases variance

Question **6**

Complete

Mark 0.00 out of 1.00

All of the following increase the width of a confidence interval except:

Select one:

- a. Decreased sample size
- b. Increased variability
- c. Increased confidence level
- d. Increased sample size

Question **7**

Complete

Mark 1.00 out of 1.00

Another name for an output attribute.

Select one:

- a. estimated variable
- b. independent variable
- c. dependent variable
- d. predictive variable

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Complete

Mark 1.00 out of 1.00

Select one:

- a. known statistics
- b. known parameters
- c. unknown statistics
- d. unknown parameters

Question **9**

Complete

Mark 0.00 out of 1.00

Consider a binary classification problem. Suppose I have trained a model on a linearly separable training set . and now I get new labelled data point which is correctly classified by the model, and far away from the decision boundary. If now add this new point to my earlier training set and re-train, in which cases is the learnt decision boundary likely to change?

Select one:

- a. When my model is a perceptron
- b. When my model is perceptron and logistic Regression
- c. When my model is logistic Regression and Gaussian discriminant Analysis.
- d. When my model is an SVM.

Question **10**

Complete

Mark 0.00 out of 1.00

Data used to optimize the parameter settings of a supervised learner model

Select one:

- a. Testing
- b. Validation
- c. Verification
- d. Training

Question **11**

Complete

Mark 0.00 out of 1.00

Determine the algorithm which is the best for this problem - Determine the characteristics of successful used car sales person?

Select one:

- a. Supervised
- b. Data Query/Retrieval
- c. Un-supervised

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Complete

Mark 1.00 out of 1.00

are fraudlulent or valid.

Select one:

- a. Data Query/Retrieval
- b. Un-supervised
- c. Supervised

Question **13**

Complete

Mark 0.00 out of 1.00

Determine the algorithm which is the best for this problem - Develop a profile for credit card customers likely to carry an average monthly balance of mre than $1000.00

Select one:

- a. Un-supervised
- b. Data Query/Retrieval
- c. Supervised

Question **14**

Complete

Mark 0.00 out of 1.00

Determine the algorithm which is the best for this problem - Do single men play golf more than married men ?

Select one:

- a. Un-supervised
- b. Supervised
- c. Data Query/Retrieval

Question **15**

Complete

Mark 0.00 out of 1.00

Determine the algorithm which is the best for this problem - What attribute simialrities group customers holding one or several insurance policies?

Select one:

- a. Un-supervised
- b. Supervised
- c. Data Query/Retrieval

Question **16**

Complete

Mark 0.00 out of 1.00

Determine the algorithm which is the best for this problem - What is the average weekly salary of all female employees under 40 years of age?

Select one:

- a. Supervised
- b. Data Query/Retrieval
- c. Un-supervised

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Complete

Mark 0.00 out of 1.00

Select one:

- a. False
- b. True

Question **18**

Complete

Mark 1.00 out of 1.00

Formula of calculating standard deviation in binomial distribution

Select one:

- a. Square root of p
- b. Square root of npq
- c. Square root of pq
- d. Square root of np

Question **19**

Complete

Mark 1.00 out of 1.00

If value of interval a is 8.5 and value of interval b is 9.5 then value of mean for uniform distribution is

Select one:

- a. 10
- b. 7.5
- c. 8
- d. 9

Question **20**

Complete

Mark 1.00 out of 1.00

If value of μ is 75, value of x is 120 with unknown standard deviation of distribution then value of z-statistic considering probability distribution as standard normal is

Select one:

- a. = 0
- b. - ve
- c. = 1
- d. + ve

Question **21**

Complete

Mark 0.00 out of 1.00

In the discriminative approach to solving classification problems, we model the conditional probability of the labels given the observations.

Select one:

- a. True
- b. False

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Complete

Mark 1.00 out of 1.00

Select one:

- a. Handling Ambiguity of Sentences
- b. Handling POS-Tagging
- c. Handling Tokenization

Question **23**

Complete

Mark 0.00 out of 1.00

Regarding bias and variance ,which of the following is true ?(High and low are relative to ideal model).

Select one:

- a. Models which overfit have a high bias and underfit have high variance.
- b. Models which overfit have a low bias and underfit have high variance.
- c. Models which overfit have a high bias and underfit have low variance.
- d. Models which overfit have a low bias and underfit have low variance.

Question **24**

Complete

Mark 0.00 out of 1.00

Selecting data so as to assure that each class is properly represented in both the training and test set.

Select one:

- a. stratification
- b. cross validation
- c. verification
- d. bootstrapping

Question **25**

Complete

Mark 0.00 out of 1.00

Simple linear regression is equipped to handle more than on predictor.

Select one:

- a. False
- b. True

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Complete

Mark 0.00 out of 1.00

overfitting?

Select one:

- a. Increase the amount of training data.
- b. Reduce the noise in the training data.
- c. Improve the optimisation algorithm being used for error minimisation.
- d. Decrease the model complexity.

Question **27**

Complete

Mark 1.00 out of 1.00

The amount of risk that an analyst will accept when making a decision can be viewed as the level of significance.

Select one:

- a. True
- b. False

Question **28**

Complete

Mark 1.00 out of 1.00

The correlation coefficient for two real valued attributes is 0.85. What does this value tell you?

Select one:

- a. The attributes are not linearly related.
- b. As the value of one attribute increases the value of the second attribute also increases.
- c. As the value of one attribute decreases the value of the second attribute increases.
- d. The attributes show a curvilinear relationship.

Question **29**

Complete

Mark 1.00 out of 1.00

The major tasks of NLP include

Select one:

- a. Discourse Analysis
- b. Machine Translation
- c. Automatic Summarization
- d. All of the above

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Complete

Mark 0.00 out of 1.00

Select one:

- a. centroid
- b. mean
- c. signature
- d. prototype

Question **31**

Complete

Mark 1.00 out of 1.00

This approach is best when we are interested in finding all possible interactions among a set of attributes.

Select one:

- a. decision tree
- b. K-Means algorithm
- c. genetic learning
- d. association rules

Question **32**

Complete

Mark 0.00 out of 1.00

This supervised learning algorithm technique can process both categorical and numeric input attributes.

Select one:

- a. Back propagation learning
- b. Logistic Regression
- c. Linear Regression
- d. Bayes classifier

Question **33**

Complete

Mark 1.00 out of 1.00

This technique associates a conditional probablity value with each data instance

Select one:

- a. Multiple linear Regression
- b. Linear Regression
- c. Logistic Regression
- d. Simple regression

Question **34**

Complete

Mark 1.00 out of 1.00

This technique uses mean and standard deviation scores to transform real-valued attributes.

Select one:

- a. z-score normalization
- b. min-max normalization
- c. decimal scaling
- d. logarithmic normalization

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Complete

Mark 1.00 out of 1.00

Select one:

- a. True
- b. False

Question **36**

Complete

Mark 0.00 out of 1.00

Training a k-nearest-neighbours classifier takes more computational time than applying it.

Select one:

- a. False
- b. True

Question **37**

Complete

Mark 1.00 out of 1.00

$V(X) = E[X]^2 - E[X^2]$

Select one:

- a. True
- b. False

Question **38**

Complete

Mark 0.00 out of 1.00

What is used in determining the nature of the learning problem?

Select one:

- a. Problem
- b. Environment
- c. All of the mentioned
- d. Feedback

Question **39**

Complete

Mark 1.00 out of 1.00

Which among these techniques is associated with conditional probability value with each instance

Select one:

- a. Linear Regression
- b. Simple Regression
- c. Multiple Regression
- d. Logistic Regression

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Complete

Mark 1.00 out of 1.00

Select one:

- a. It relates inputs to outputs.
- b. It is used for prediction.
- c. It may be used for interpretation.
- d. It discovers causal relationships.

Question **41**

Complete

Mark 1.00 out of 1.00

Which statement about outliers is true?

Select one:

- a. Outliers should be part of the training dataset but should not be present in the test data.
- b. Outliers should be identified and removed from a dataset.
- c. Outliers should be part of the test dataset but should not be present in the training data.
- d. The nature of the problem determines how outliers are used.

Question **42**

Complete

Mark 0.00 out of 1.00

Which statement is true about the decision tree attribute selection process?

Select one:

- a. A categorical attribute may appear in a tree node several times but a numeric attribute may appear at most once.
- b. Numeric and categorical attributes may appear in at most one tree node
- c. Both numeric and categorical attributes may appear in several tree nodes.
- d. A numeric attribute may appear in several tree nodes but a categorical attribute may appear at most once.

Question **43**

Complete

Mark 1.00 out of 1.00

Which statement is true about the K-Means algorithm?

Select one:

- a. The output attribute must be categorical.
- b. All attribute values must be categorical.
- c. All attributes must be numeric
- d. Attribute values may be either categorical or numeric.

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Complete

Mark 0.00 out of 1.00

with the following claims. Which ones would you consider accepting?

Select one:

- a. My method achieves a cross-validation error lower than all previous methods! (Footnote: When regularisation parameter λ is chosen so as to minimise cross-validation error.)
- b. My method achieves a training error lower than all previous methods!
- c. My method achieves a test error lower than all previous methods! (Footnote: When regularisation parameter λ is chosen so as to minimise cross-validation error.)
- d. My method achieves a test error lower than all previous methods! (Footnote: When regularisation parameter λ is chosen so as to minimise test error.)

Question **45**

Complete

Mark 0.00 out of 1.00

You observe the following while fitting a linear regression to the data: As you increase the amount of training data, the test error decreases and the training error increases. The train error is quite low (almost what you expect it to), while the test error is much higher than the train error. What do you think is the main reason behind this behaviour? Choose the most probable option.

Select one:

- a. High estimation bias
- b. High model bias
- c. High variance
- d. None of the above

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