

### File 3

1) Among the following identify the one in which dimensionality reduction reduces.

d) collinearity: in dimensionality reduction features are grouped according to affinity or some degree of connectedness between them, thus reducing relationship between the principal feature obtained

2) Which of the following machine learning algorithm is based upon the idea of bagging?

b) Random Forest

3) choose a disadvantage of decision trees among the following.

c) Decision Tree are prone to overfit

4) What is the term known as on which the machine learning algorithms build a model based on sample data?

a) Data Training

5) Which of the following machine learning techniques helps in detecting the outliers in data?

c) anomaly detection

6) Identify the incorrect numerical functions in the various function representation of machine learning.

c) case based

7) Analysis of ML algorithm needs

d) Both a and b

8) Identify the difficulties with the k-nearest neighbor algorithm.

c) Both a and b

9) The total types of the layer in radial basis function neural networks

c) 3: an input layer, a hidden layer, and an output layer.

10) Which of the following is not a supervised learning

a) PCA

11) What is unsupervised learning?

a) Number of groups may be known (Unsupervised learning is used to cluster data according to patterns)

12) Which of the following is not a machine learning algorithm?

b) SVG

13) \_\_\_\_\_ is the scenario when the model fails to decipher the underlying trend in the input data

b) Underfitting

14) Real-Time decisions, Game AI, Learning Tasks, Skill acquisition, and Robot Navigation are applications of

a) Reinforcement learning

What is called the average squared difference between classifier predicted output and actual output?

55) What is called the average squared difference between 55classifier?

b) Mean squared error

16) Logistic regression is a ..... regression technique that is used to model data having a ..... outcome.

a) Linear, binary

17) You are given reviews of few netflix series marked as positive, negative and neutral. Classifying reviews of a new netflix series is an example of

14) Real-Time decisions, Game AI, Learning Tasks, Skill acquisition, and Robot Navigation are

applications of .....

15) What is called the average squared difference between classifier predicted output and actual

output?

A. supervised learning

18) Following is powerful distance metrics used by Geometric model

C. both a and b

19) Which of the following techniques would perform better for reducing dimensions of a data set?

A. removing columns which have too many missing values.

20) Supervised learning and unsupervised clustering both require which is correct according to the statement.

C. input attribute.

21) What is the meaning of hard margin in SVM?

(B) SVM allows high amount of error in classification

22)

Increase in which of the following hyper parameter results into overfit in Random forest? (1). Number of Trees. (2). Depth of Tree, (3). Learning Rate

(B) Only 2

23)

Below are the 8 actual values of target variable in the train file: [0,0,0, 0, 1, 1,1,1,1,1], What is the entropy of the target variable?

(A)  $-(6/10 \log(6/10) + 4/10 \log(4/10))$

24) Lasso can be interpreted as least-squares linear regression where (A) weights are regularized with the  $l_1$  norm

25) Consider the problem of binary classification. Assume I trained a model on a linearly separable training set, and now I have a new labeled data point that the model properly categorized and is far away from the decision border. In which instances is the learnt decision boundary likely to change if I now add this additional point to my previous training set and re-train? When the training model is,

(A) Perceptron and logistic regression

26) Assume you've discovered multi-collinear features. Which of the following actions do you intend to take next? (1). Both collinear variables should be removed. (2). Instead of deleting both variables, we can simply delete one. (3). Removing correlated variables may result in information loss. We may utilize penalized regression models such as ridge or lasso regression to keep such variables.

(B) Only 2

27)

A least squares regression study of weight ( $y$ ) and height ( $x$ ) yielded the following least squares line:  $y = 120 + 5x$ . This means that if the height is increased by one inch, the weight should increase by what amount?

(B) increase by 5 pound

28)

The line described by the linear regression equation (OLS) attempts to \_\_\_\_?

(A) Pass through as many points as possible.

(D) Minimize the squared distance from the points

29)

For two real-valued attributes, the correlation coefficient is 0.85. What does this value indicate?

(B) As the value of one attribute increases the value of the second attribute also increases

30)

Which neural network architecture would be most suited to handle an image identification problem (recognizing a dog in a photo)?

(B) Convolutional Neural Network