Machine Learning (ML) solved MCQs

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376. Suppose you plotted a scatter plot between the residuals and predicted values in linear regression and you found that there is a relationship between them. Which of the following conclusion do you make about this situation?

A. since the there is a relationship means our model is not good

B. since the there is a relationship means our model is good

C. cant say

D. none of these

discuss

A.since the there is a relationship means our model is not good

377. Lets say, a Linear regression model perfectly fits the training data (train error is zero). Now, Which of the following statement is true?

A. you will always have test error zero

B. you can not have test error zero

C. none of the above

discuss

C.none of the above

B. if r squared decreases, this variable is not significant.

C. individually r squared cannot tell about variable importance. we cant say anything about it right now.

D. none of these.

discuss

C.individually r squared cannot tell about variable importance. we can�t say anything about it right now.

379. Which of the one is true about Heteroskedasticity?

A. linear regression with varying error terms

B. linear regression with constant error terms

C. linear regression with zero error terms

D. none of these

discuss

A.linear regression with varying error terms

380. Which of the following assumptions do we make while deriving linear regression parameters?1. The true relationship between dependent y and predictor x is linear2. The model errors are statistically independent3. The errors are normally distributed with a 0 mean and constant standard deviation4. The predictor x is non-stochastic and is measured error-free

A. 1,2 and 3.

B. 1,3 and 4.

C. 1 and 3.

D. all of above.

discuss

D.all of above.

381. To test linear relationship of y(dependent) and x(independent) continuous variables, which of the following plot best suited?

A. scatter plot

B. barchart

C. histograms

D. none of these

discuss

A.scatter plot

382. which of the following step / assumption in regression modeling impacts the trade- off between under-fitting and over-fitting the most.

A. the polynomial degree

B. whether we learn the weights by matrix inversion or gradient descent

C. the use of a constant-term

discuss

A.the polynomial degree

383. Can we calculate the skewness of variables based on mean and median?

A. true

B. false

discuss

B.false

384. Which of the following is true aboutRidge or Lasso regression methods in case of feature selection?

A. ridge regression uses subset selection of features

B. lasso regression uses subset selection of features

C. both use subset selection of features

D. none of above

B.lasso regression uses subset selection of features

discuss

385. Which of the following statement(s) can be true post adding a variable in a linear regression model?1. R-Squared and Adjusted R-squared both increase2. R- Squared increases and Adjusted R-

A. 1 and 2

B. 1 and 3

C. 2 and 4

D. none of the above

A.1 and 2

discuss

386. How many coefficients do you need to estimate in a simple linear regression model (One independent variable)?

A. 1

B. 2

C. cant say

B.2

discuss

387. Conditional probability is a measure of the probability of an event given that another event has already occurred.

A. true

B. false

A.true

discuss

388. What is/are true about kernel in SVM?1. Kernel function map low dimensional data to high dimensional space2. Its a similarity function

A. 1

B. 2

C. 1 and 2

D. none of these

C.1 and 2 discuss

389. Suppose you are building a SVM model on data X. The data X can be error prone which means that you should not trust any specific data point too much. Now think that you want to build a SVM model which has quadratic kernel function of polynomial degree 2 that uses Slack variable C as one of its hyper parameter.What would happen when you use very small C (C~0)?

A. misclassification would happen

B. data will be correctly classified

C. cant say

D. none of these

A.misclassification would happen discuss

390. 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

A. true

B. false

B.false

discuss

392. How do you handle missing or corrupted data in a dataset?

A. a. drop missing rows or columns

B. b. replace missing values with mean/median/mode

C. c. assign a unique category to missing values

D. d. all of the above

D.d. all of the above

discuss

393. Which of the following statements about Naive Bayes is incorrect?

A. a.attributes are equally important.

B. b.attributes are statistically dependent of one another given the class value.

C. c.attributes are statistically independent of one another given the class value.

D. d.attributes can be nominal or numeric

B.b.attributes are statistically dependent of one another given the class value.

discuss

394. The SVMs 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

C.the data is noisy and contains overlapping points

discuss

395. If there is only a discrete number of possible outcomes called .

A. modelfree

B. categories

C. prediction

D. none of above

396. Some people are using the term instead of prediction only to avoid the weird idea that machine learning is a sort of modern magic.

A. inference

B. interference

C. accuracy

D. none of above

A.inference discuss

397. The term can be freely used, but with the same meaning adopted in physics or system theory.

A. accuracy

B. cluster

C. regression

D. prediction

D.prediction discuss

398. Common deep learning applications / problems can also be solved using

A. real-time visual object identification

B. classic approaches

C. automatic labeling

D. bio-inspired adaptive systems

B.classic approaches discuss

399. Identify the various approaches for machine learning.

A. concept vs classification learning

B. symbolic vs statistical learning

C. inductive vs analytical learning

D. all above

D.all above discuss

400. what is the function of Unsupervised Learning?

A. find clusters of the data and find low-dimensional representations of the data

B. find interesting directions in data and find novel observations/ database cleaning

C. interesting coordinates and correlations

D. all

discuss