

21 When implementing linear regression of some dependent variable y on the set of independent variables $\mathbf{x} = (x_1, \dots, x_r)$, where r is the number of predictors, which of the following statements will be true?

Ans. $\beta_0, \beta_1, \dots, \beta_r$ are the regression coefficients.

22 What indicates that you have a perfect fit in linear regression?

Ans. The value $R^2 = 1$, which corresponds to $SSR = 0$

23 In simple linear regression, the value of what shows the point where the estimated regression line crosses the y axis?

Ans. β_0

24 Check out these four linear regression plots:

Ans The top-left plot

25 There are five basic steps when you're implementing linear regression:

Ans d, e, c, b, a

26 Which of the following are optional parameters to LinearRegression in scikit-learn?

Ans `fit_intercept`, `normalize`, `copy_X` and `n_jobs`

27 While working with scikit-learn, in which type of regression do you need to transform the array of inputs to include nonlinear terms such as x^2 ?

Ans Polynomial regression

28 You should choose statsmodels over scikit-learn when:

Ans A) You want graphical representations of your data.

29 _____ is a fundamental package for scientific computing with Python. It offers comprehensive mathematical functions, random number generators, linear algebra routines, Fourier transforms, and more. It provides a high-level syntax that makes it accessible and productive.

Ans Numpy

30 _____ is a Python data visualization library based on Matplotlib. It provides a high-level interface for drawing attractive and informative statistical graphics that allow you to explore and understand your data. It integrates closely with pandas data structures.

Ans Seaborn

41 Among the options provided, the one in which dimensionality reduction reduces is:

Ans Entropy

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

Ans Random Forest

43 Choose a disadvantage of decision trees among the following.

Ans Decision Tree are prone to overfit

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

Ans Training data

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

Ans Anamoly detection

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

Ans Support Vector

47 Analysis of ML algorithm needs

Ans Both a and b

Identify the difficulties with the k-nearest neighbor algorithm.

Ans Both a and b

The total types of the layer in radial basis function neural networks is _____

Ans 2

Which of the following is not a supervised learning

Ans KMean