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1] 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: Both a and b

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

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

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

Ans: y

4) Check out these four linear regression plots: which one represented an underfitted model? list

Ans: The bottom right-right plot

5) There are five basic steps when you're implementing linear regression: However those steps are currently listed in the wrong order. What's the correct order?

Ans: d, b, e, a, c

6) Which of the following are optional parameters to Linear Regression in scikit-learn?

Ans: n_jobs

7) 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

8) You should choose statsmodels over scikit-learn when:

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Ans: You want graphical representation of your data

9) _____ is a fundamental package of scientific computing with python. It offers comprehensive mathematical functions, random number generators, linear algebra routines, fourier transforms

Ans: Numpy

10) _____ 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

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

Ans: Collinearity

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

Ans: Random Forest

13) Choose a disadvantage of decision trees among the following

Ans: Decision Tree are prone to overfit

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

Ans: Training data

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

Ans: Anomaly detection

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

Ans: Case based

17) Analysis of ML algorithm needs

Ans: Statistical learning

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

Ans: Both a and b

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

Ans: 3

20) Which of the following is not a supervised learning

Ans: PCA