MCQ Task 22.12.2023

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

Ans: Both a) and b)

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

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

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

Ans: b) B0

Q.24 **Which one represents an underfitted model?**

Ans: d) The top-left plot

Q.25 **There are five basic steps when you're implementing linear regression:**
- **a. Check the results of model fitting to know whether the model is satisfactory.**
- **b. Provide data to work with, and eventually do appropriate transformations.**
- **c. Apply the model for predictions.**
- **d. Import the packages and classes that you need.**
- **e. Create a regression model and fit it with existing data.**

However, those steps are currently listed in the wrong order. What's the correct order?

Ans: d) d, b, e, a, c

Q. 26 **Which of the following are optional parameters to Linear Regression in scikit-learn?**

Ans: b) fit_intercept, c) normalize, d) copy_X, e) n_jobs, f) reshape

Q. 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: c) Polynomial regression

Q.28 **You should choose stats models over scikit-learn when:**

Ans: A) You want graphical representations of your data., b) You're working with nonlinear terms., c) You need more detailed results.

Q.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: b) Numpy

Q.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: b) Seaborn

Q.41 **Among the following identify the one in which dimensionality reduction reduces.**

Ans: d) Collinearity

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

Ans: b) Random Forest

Q.43 **Choose a disadvantage of decision trees among the following.**

Ans: c) Decision Tree are prone to overfit

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

Ans: c) Training data

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

Ans: c) Anamoly detection

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

Ans: c) Case based

Q.47 **Analysis of ML algorithm needs:**

Ans: d) Both a and b

Q.48 **Identify the difficulties with the k-nearest neighbor algorithm.**

Ans: d) Both a and b

Q.49 **The total types of the layer in radial basis function neural networks is _____**

Ans: c) 3

Q.50 **Which of the following is not a supervised learning?**

Ans: a) PCA