

Question-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?

- a) $\beta_0, \beta_1, \dots, \beta_r$ are the **regression coefficients**.
- b) Linear regression is about determining the **best predicted weights** by using the **method of ordinary least squares**.
- c) E is the random interval
- d) Both a and b

Answer – d(Both a and b)

Question-What indicates that you have a **perfect fit** in linear regression?

Answer- The value $R^2 = 1$, which corresponds to $SSR = 0$

Question-Which one represents an **underfitted** model?

Answer- The top-left plot

Question-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?

Answer - d, b, e, a, c

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

Answer- Reshape

Question-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 ?

Answer- Polynomial Regression

Question-You should choose statsmodels over scikit-learn when:

Answer-You need more detailed results.

Question-

Numpy 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

Question-

Seaborn 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.

