Flip Robo Technologies – Assignment 1

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

$\beta_0, \beta_1, \ldots, \beta_r$ are the regression coefficients

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

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?

Y (y intercept)

4, Check out these four linear regression plots: Which one represents an underfitted model?

A

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?

e, d, b, a, c

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

fit_intercept

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?

Polynomial regression

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

You need more detailed results.

9, **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.

10, **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.