Machine Learning Worksheet 2

1. In the linear regression equation y = θ0 + θ1x, θ0 is the:

C) y intercept

2. True or False: Linear Regression is a supervised learning algorithm.

A) True

3. In regression analysis, the variable that is being predicted is:

B) the dependent variable

4. Generally, which of the following method(s) is used for predicting continuous dependent variables?

B) Linear Regression

5. The coefficient of determination is:

C) the correlation coefficient squared

6. If the slope of the regression equation is positive, then:

B) y increases as x increases

7. Linear Regression works best for:

A) linear data

8. The coefficient of determination can be in the range of:

A) 0 to 1

9. Which of the following evaluation metrics can be used for linear regression?

B) RMSE

D) MAE

10. Which of the following is true for linear regression?

A) Linear regression is a supervised learning algorithm.

C) Shape of linear regression's cost function is convex.

11. Which of the following regularizations can be applied to linear regression?

A) Ridge ***B) Lasso*** ***D) Elastic Net***

13. Which of the following assumptions are true for linear regression?

A) Linearity ***B) Homoscedasticity*** ***D) Normality***

14. Explain Linear Regression?

Linear regression is a data analysis technique that predicts the value of unknown data by using another related and known data value. It mathematically models the unknown or dependent variable and the known or independent variable as a linear equation.

15. What is difference between simple linear and multiple linear regression?

Multiple Regression is a step beyond simple regression. The main difference between simple and multiple regression is that multiple regression includes two or more independent variables in the model, rather than just one as in Linear Regression.