

## Machine Learning Worksheet 3

1. Which of the following are disadvantages of using Hard Margin SVM classifier?

**B) They cannot be used when the data is not completely linearly separable while allowing no errors.**

**C) They are not optimal to use in case of outliers.**

2. Which of the following statements are true regarding maximal margin classifier

**B) It's the classifier for which the margin length or the distance between the closest data-point on either side of the classifier and the classifier is maximized.**

3. Which of the following statements are true regarding soft margin SVM classifier?

**A) They are less sensitive to outliers and can be used even in their presence.**

4. Which of the following statements are true regarding SVMs?

**A) They take the data from lower dimensional space to some higher dimensional space in case the data is not likely to be linearly separable.**

5. The coefficient of determination is:

**C) the correlation coefficient squared**

6. How can SVM be classified?

**C) It is a model trained using supervised learning. It can be used for classification and regression.**

7. The quality of an SVM model depends upon:

**D) All of the above**

8. The SVM's are less effective when:

**C) The data is noisy and contains overlapping points.**

9. What would happen when you use very small C ( $C \sim 0$ )?

**A) Misclassification would happen.**

10. What do you mean by generalization error in terms of the SVM?

***B) How accurately the SVM can predict outcomes for unseen data.***