

MACHINE LEARNING

1. Which of the following are disadvantages of using Hard Margin SVM classifier?
 - A) They allow misclassifications, that's why they are not optimal.
 - 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.
 - D) None of the above.

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

2. Which of the following statements are true regarding maximal margin classifier?
 - A) It is the most optimal classifier in a completely linearly separable data.
 - 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.
 - C) Any possible classifier which can linearly separate the data of two classes is called maximal margin classifier.**
 - D) All of the above.

Ans:- (C) Any possible classifier which can linearly separate the data of two classes is called maximal margin classifier.

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.
 - B) They make sure that there is no data point present in the margin area.
 - C) They allow some degree of errors or misclassification.
 - D) They can be used in case data is not completely linearly separable.**

Ans:- D) They can be used in case data is not completely linearly separable.

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.
 - B) They use the kernel tricks to escape the complex computations required to transform the data.
 - C) If the data is not linearly separable SVM technique cannot be used.**
 - D) All of the above.

Ans:- (C) If the data is not linearly separable SVM technique cannot be used.

5. Which of the following Statements are true regarding the Kernel functions used in SVM?
 - A) These functions give value of the dot product of pairs of data-points in the desired higher dimensional space without even explicitly converting the whole data into higher dimensional space.**
 - B) We have to first convert the whole data into the higher dimensional space before applying the kernel function.
 - C) The data product values given by the kernel functions are used to find the classifier in the higher dimensional space.
 - D) None of the above

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Ans:- (A) These functions give value of the dot product of pairs of data-points in the desired higher-dimensional space without even explicitly converting the whole data into higher-dimensional space.

6. How can SVM be classified?

- A) It is a model trained using unsupervised learning. It can be used for classification and regression.
- B) It is a model trained using unsupervised learning. It can be used for classification but not for regression
- C) It is a model trained using supervised learning. It can be used for classification and regression.**
- D) It is a model trained using supervised learning. It can be used for classification not for regression.

Ans:- (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:

- A) Selection of Kernel
- B) Kernel Parameters
- C) Soft Margin Parameter C
- D) All of the above**

Ans:- (D) All of the above

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8. The SVM's are less effective when:
- A) The data is linearly separable.
 - B) The data is clean and ready to use.
 - C) The data is noisy and contains overlapping points.**
 - D) None of these.

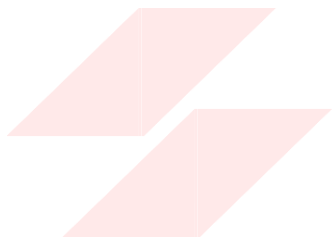
Ans:- (C)The data is noisy and contains overlapping points.

9. What would happen when you use very small C ($C \sim 0$)?
- A) Misclassification would happen.**
 - B) Data will be correctly classified.
 - C) Can't say
 - D) None of these.

Ans:- (A) Misclassification would happen.

10. What do you mean by generalization error in terms of the SVM?
- A) How far the hyperplane is from the support vectors.
 - B) How accurately the SVM can predict outcomes for unseen data.**
 - C) The threshold amount of error in an SVM.
 - D) None of these.

Ans:- (B)How accurately the SVM can predict outcomes for unseen data.



FLIP ROBO
