

CS381/780 Data Analytic Review Quiz 6

Instruction: For multiple choice questions, clearly circle one of the choice; for all other questions, write your answer right below the questions. All questions carry the same weights.

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Question 1: Which of the following regarding Support Vector Machine (SVM) and Logistic Regression are true?

1. The difference between Soft margin and Hard margin is that hard margin allows some mis-classification on some data points.
2. SVM finds its optimal model parameters by maximizing the margin between the decision boundary and the observed data.
3. Logistic Regression finds its optimal model parameters by the minimizing the sum of distance among the observed data.

- A. Only 1
- B. Only 2**
- C. Only 3
- D. 1 and 2
- E. 2 and 3

Question 2: What are support vectors?

Answer: The data points that are closer to the hyperplane and influence the position and orientation of the hyperplane.

Question 3: What is the margin in a SVM?

Answer: The distance between the decision surface (line, hyperplane, etc.) of the data points of both classes.