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?

False, Soft Margin allows this

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    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 obseved data.
```

Logistic Regression does it by minimizing

**2 I googled
How does SVM find it's optimal model parameters?**

I think 2 is true

3 is FALSE

A. Only 1

B. Only 2

C. Only 3

D. 1 and 2

E. 2 and 3

Question 2: What are support vectors?

Answer: **Support Vectors are input data points or features that are near the hyperplane. They lie on the boundaries of the margins**

Question 3: What is the margin in a SVM?

Answer: **Margin in a SVM is the distance between nearest data points from each class.**