CS5785 Quiz 1

Name: _____   NetID: _____

1. Logistic regression is a classification method.   **True** or **False**? True

2. We can get a classifier with better accuracy than the Bayes classifier by collecting more data and using more flexible classification algorithms.   **True** or **False**? False

3. The average misclassification rate of the classifier that, given query x, predicts the class y that maximizes $\mathbb{P}(Y = y \mid X = x)$ is called the Bayes rate.   **True** or **False**? True

4. The one-standard-error rule dictates that we should pick the complexity parameter corresponding with the *smallest* cross-validated estimate of error.   **True** or **False**? False

5. Logistic regression is fit by assuming that $\mathbb{P}(Y = 1 \mid X = x) = \beta^{\top} x$ and finding the β that maximizes the likelihood of the data under this generative model.   **True** or **False**? False