COMP 5970/6970 HW 5: 5 questions 5 points 5% Credit

**Due before 11:59 PM Friday April 12**

Instructions:

1. This is an individual assignment. You should do your own work. Any evidence of copying will result in a zero grade and additional penalties/actions.
2. Enter your answers in this Word file. Submissions must be uploaded **as a single file** (Word or PDF preferred, but other formats acceptable as long as your work is LEGIBLE) to Canvas before the due date and time. Don’t turn in photos of illegible sheets. **If an answer is unreadable, it will earn zero points.** Cleanly handwritten submissions (print out this assignment and write answers in the space provided, with additional sheets used if needed) scanned in as PDF and uploaded to Canvas are acceptable.
3. **Submissions by email or late submissions (even by minutes) will receive a zero grade.** No makeup will be offered unless prior permission to skip the assignment has been granted, or there is a valid and verifiable excuse.

**Multiple Choice Questions (5 points)**

*In the following questions, circle the correct choice. If more than one answer is correct, circle all that apply. In those cases, partial credit will be given to partially correct answers. No explanation needed. Incorrect answers or unanswered questions are worth zero points.*

1. “There is a one-to-one correspondence between logistic regression and Gaussian Naïve Bayes.” The statement is:

[a] True

[b] False

2. “The decision surface of logistic regression and Gaussian Naïve Bayes will always be the same if P(Xi | Y = yk) ~ N(μik, σi).” The statement is:

[a] True

[b] False

3. “You can set a negative learning rate when performing MCLE in logistic regression using gradient ascent.” The statement is:

[a] True

[b] False

4. “Stochastic gradient descent is always better than batch gradient descent.” The statement is:

[a] True

[b] False

5. “Gradient descent is the only way to learn parameters of linear regression.” The statement is:

[a] True

[b] False