**CIS 3715 Spring 2020: Quiz 4**  STUDENT NAME: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. (1.5 points) What is the objective of supervised learning?
2. (1.5 points) What is the difference between classification and regression?
3. (1.5 points) Why do we say a k-nearest neighbor is a “lazy” algorithm?
4. (2.5 points) You are given a data set with the following 5 data points: (1,1), (3,1), (5,1), (1,5), (5,5). Points (1,1) and (1,5) are labeled as positive and the remaining 3 points are labeled as negative. What would be a k-nearest neighbor prediction of point (1, 4) if k =1? What will be the prediction in k = 3?
5. You are given pandas table df with 2 columns named ‘month’, and ‘amount’. The first column is of type str and the second is of type float. Write a piece of Python code that
6. (1 point) Finds how many unique strings appear in the ‘month’ column
7. (1 point) Finds the average of all amounts in the data
8. (1 point) Finds the sum of all amounts in the month of ‘February’