KNN – Housing Project go to **S:\\Public\\CS\\KNN Project.docx**

Task to construct four KNN models Download the document

***Due Date: Wed. March 18th 😊Test Date: Fri, March 20th***

Data Set A

1. Normal KNN algorithm part I
2. Weighted KNN algorithm part I

Data Set B

1. Normal KNN algorithm part II
2. Weighted KNN algorithm part II

Data Set A to use for both algorithms:

Training Data:

You will use 19 random classmate’s data – not yours

Testing Data:

You will use the remaining 8 classmate’s – not yours

Data Set B to use for both algorithms:

Training Data:

You will use the first seven data points of your classmates

Test Data:

You will use the final three data points of your classmates

**The price per square foot will be Goal.**

What to do…

1. Normalize your Data
2. Using your Data Analyze to determine what K value {K = 1, 2, or 3} would produce the best accuracy.
3. Show/Report your discovery
4. 😊
5. Create a weighted KNN algorithm by choosing scaling values that you (this is your personal preference) for each category.
6. Your goal is for a significantly better accuracy.
7. Report why you chose the values and the results of your “tinkering” of the algorithm
8. 😊
9. Repeat 1- 8 but with Data Set B

😊 is to be determined, but has to do with another data set entirely that you will have to add to your write-up in a single class period (kind of like a test)

What to turn in…

Your Data Set A Split – Who was in your Training and Testing Samples

You will write-up (like a science lab) your analysis and results for the KNN algorithm for Data Set A

You will write-up your formula and rationale for it, your analysis and results for the W-KNN algorithm for Data Set A

You will write-up your analysis and results for the KNN algorithm for Data Set B

You will write-up your formula and rationale for it, your analysis and results for the W-KNN algorithm for Data Set B

Each section will contain Python Code of the algorithm used and Comments were needed.

Each section will contain Screen Shots of your accuracies.

The “ 😊 “ sections will not be a part of the write-up.