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Artificial Intelligence
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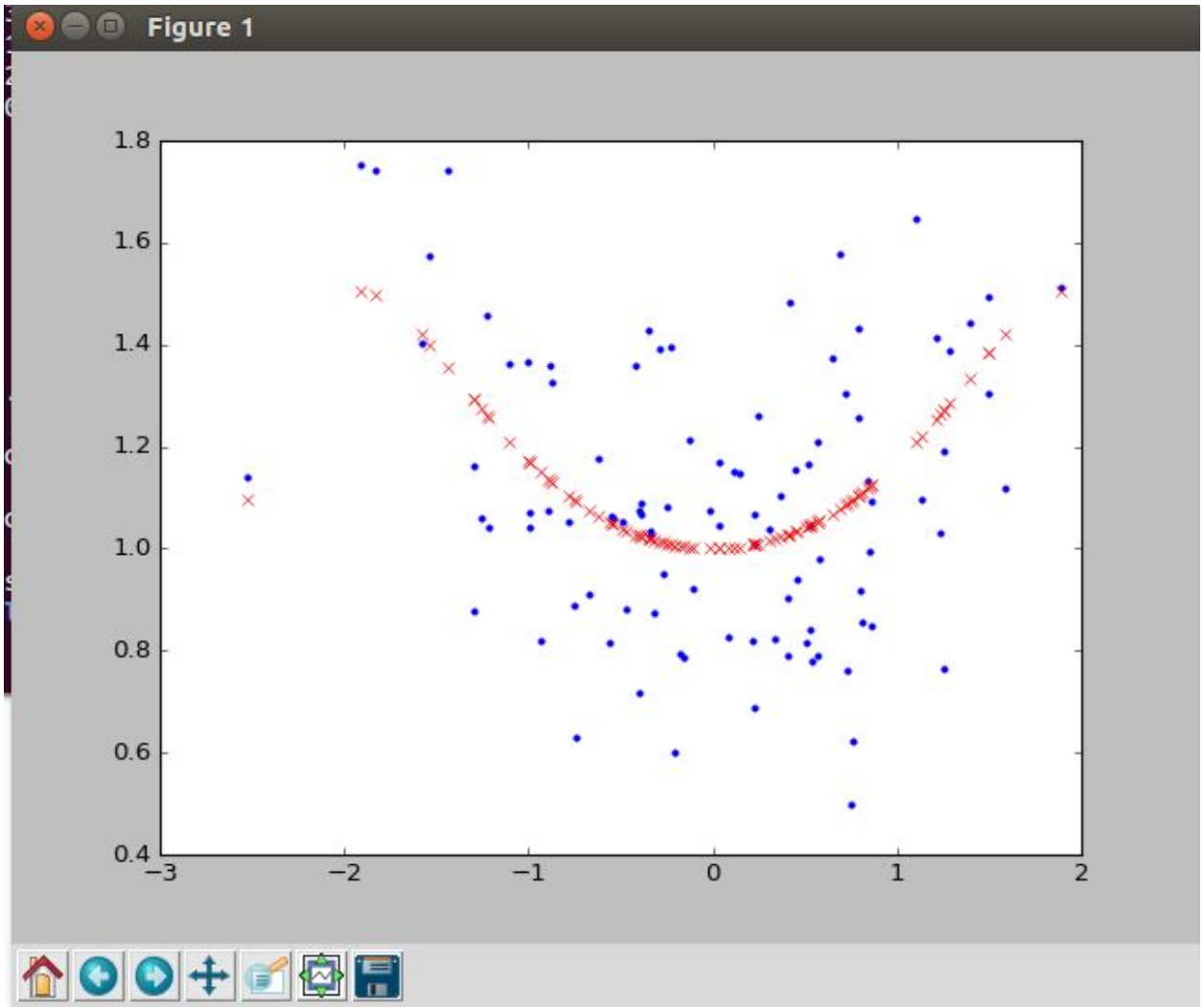
Homework 4

I was able to successfully download and run the code we had from class. I used the same data sets and it worked perfectly. I then tried implementing the new dataset and could not seem to get it to work. At first the error occurred because the returned X and y did not match up with our previous ideas of X and y. I had to concatenate and reshape the data. I shaped the arrays to be the same shape as the previous working data. I also made sure all the datatypes were the same as the previous working data. Despite massaging the data I was not able to get the program to work. I was able to plot the data but I could not get nearest neighbor working.

Here is the plot:



Here is the error I was getting:

```
 [ 0.52292127  1.1643096 ]
 [-0.11162864  0.92169372]
 [-0.55909049  0.81557379]
 [ 0.7272164   0.76058347]
 [-1.2242349   1.45829351]
 [-0.16052337  0.78648995]
 [ 1.10423633  1.64530332]
 [-1.43407429  1.74081956]
 [ 0.52354104  0.84201645]
 [-0.12341101  1.21360143]
 [-0.20316394  0.59900547]
 [-0.54254911  1.06031109]
 [ 0.03280802  1.17097015]
 [ 0.76473071  0.62202373]
 [-1.58058829  1.40180893]
 [ 0.3685403   1.10469174]
 [-0.74319027  0.62803717]
 [ 1.25300638  0.766343  ]
 [-0.38529368  1.08917735]
 [ 0.2265531   1.00744298]]
[ 1.00019821  1.40010516  1.09518828  1.01154957  1.02809968  1.07431031
  1.02861477  1.04574557  1.09396725  1.50514177  1.10427309  1.29236257
  1.02391867  1.00852801  1.00759159  1.00965919  1.05394741  1.13127878
  1.01809152  1.06849878  1.00974091  1.33511684  1.13605367  1.02528146
  1.14924407  1.03834393  1.21958122  1.00840473  1.02019283  1.00003664
  1.03288395  1.25603631  1.00496988  1.05225447  1.12829944  1.08649324
  1.12312412  1.00329414  1.00203517  1.10316996  1.1094743   1.49918307
  1.3852752   1.05508035  1.12375366  1.09531539  1.01884793  1.06417121
  1.01587868  1.00828883  1.07975993  1.26400392  1.02695858  1.01339093
  1.02708314  1.17181358  1.50562625  1.10636057  1.00111823  1.28463525
  1.42147181  1.12434736  1.01811045  1.0422479   1.25474305  1.03548732
  1.11818457  1.29206279  1.16772115  1.04949171  1.21076154  1.27244719
  1.03471079  1.3838831   1.04803488  1.10389175  1.02613577  1.16865705
  1.01517691  1.27365248  1.04467735  1.00199574  1.0512163   1.08793978
  1.25967562  1.00413132  1.20986789  1.35477849  1.04478544  1.00243981
  1.00662581  1.04816729  1.00017223  1.09759371  1.42038039  1.02196407
  1.09198419  1.27225468  1.02402958  1.00824574]
(100, 2)
(100,)
<type 'numpy.ndarray'>
<type 'numpy.float64'>
Traceback (most recent call last):
  File "knn_in_class.py", line 70, in <module>
    clf.fit(X_train, y_test)
  File "/usr/local/lib/python2.7/dist-packages/sklearn/neighbors/base.py", line 761, in fit
    X, y = check_X_y(X, y, "csr", multi_output=True)
  File "/usr/local/lib/python2.7/dist-packages/sklearn/utils/validation.py", line 531, in check_X_y
    check_consistent_length(X, y)
  File "/usr/local/lib/python2.7/dist-packages/sklearn/utils/validation.py", line 181, in check_consistent_length
    " samples: %r" % [int(l) for l in lengths])
ValueError: Found input variables with inconsistent numbers of samples: [90, 10]
charlie@charlie-VirtualBox:~/Documents/ArtificialIntelligence/Hill/hill-04$
```