knn_helper.py u

hw > knn_helper.py > ...

```python
new_point = [0.5, 0.2]

data = {
    'one': [0.3, 0.8, "A"],
    'two': [-0.3, 1.6, "B"],
    'three': [0.9, 0, "B"],
    'four': [1, 1, "A"]
}



for key, value in data.items():
    print(key)
    print(value)
    # calc manhattan distance
    mhDistance = abs(value[0] - new_point[0]) + abs(value[1] - new_point[1])
    value.append(round(mhDistance, 3))
    data[key] = value

print("3-nn are one, three, and four")
for key, value in data.items():
    print(key)
    print(value)

data2 = {
    'one': [0.3, 0.8, "A", 0.8],
    'three': [0.9, 0, "B", 0.6],
    'four': [1, 1, "A", 1.3]
}

data3 = {
    'A': [0, 0],
    'B': [0, 0]
}

for key, value in data2.items():
    data3[value[2]][0] += value[3]
    data3[value[2]][1] += round((1 / (value[3] * value[3])), 3)

for key, value in data3.items():
    print(key)
    print(value)
print("Output class non-weighted - 'A'")
print("Output class     weighted - 'B'")
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
PS C:\Users\IanJE\Documents\byu_cs\cs270> & c:/Users/IanJE/Documents/byu_cs/cs270/sklearn-env/Scripts/python.exe c:/Users/IanJE/Documents/byu_cs/cs270/hw/knn_helper.py
one
[0.3, 0.8, 'A']
two
[-0.3, 1.6, 'B']
three
[0.9, 0, 'B']
four
[1, 1, 'A']
3-nn are one, three, and four
one
[0.3, 0.8, 'A', 0.8]
two
[-0.3, 1.6, 'B', 2.2]
three
[0.9, 0, 'B', 0.6]
four
[1, 1, 'A', 1.3]
A
[2.1, 2.154]
B
[0.6, 2.778]
Output class non-weighted - 'A'
Output class     weighted - 'B'
PS C:\Users\IanJE\Documents\byu_cs\cs270>
```

knn_helper.py U

hw > knn_helper.py > ...

```
51
52  for key, value in data2.items():
53      print(key)
54      print(value)
55
56  print("Regression")
57  regression_labels = [.6, .8, 1.2]
58  print(regression_labels)
59  print(weights)
60
61  labels_mean = round((.6 + .8 + 1.2)/3, 3)
62  print(labels_mean)
63
64  weighted_mean = 0
65  for a, b in zip(regression_labels, weights):
66      weighted_mean += a*b
67  weighted_mean = round(weighted_mean/sum(weights), 3)
68  print(weighted_mean)
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
one
[0.3, 0.8, 'A', 0.8, 1.562]
three
[0.9, 0, 'B', 0.6, 2.778]
four
[1, 1, 'A', 1.3, 0.592]
Regression
[0.6, 0.8, 1.2]
Regression
Regression
Regression
[0.6, 0.8, 1.2]
[1.562, 2.778, 0.592]
0.867
0.785
```