

m3

March 14, 2021

```
[1]: from numpy import *  
import operator  
  
def createDataSet():  
    group = array([[1.0,1.1],[1.0,1.0],[0,0],[0,0.1]])  
    labels = ['A','A','B','B']  
    return group, labels
```

```
[10]: import kNN  
group,labels = kNN.createDataSet()  
kNN.classify0([0,0], group, labels, 3)
```

```
[10]: 'B'
```

```
[12]: datingDataMat,datingLabels = kNN.file2matrix('datingTestSet2.txt')
```

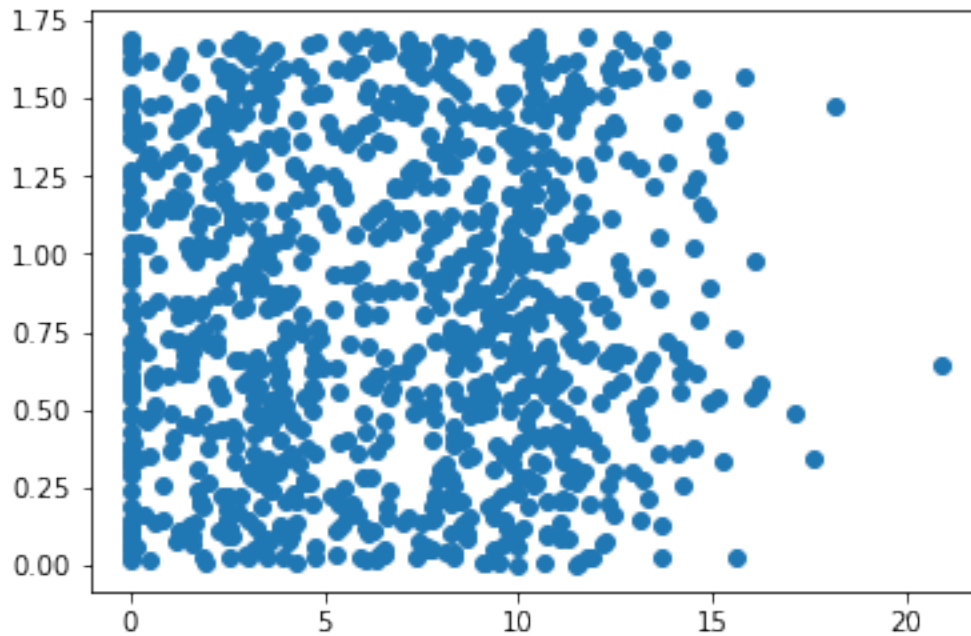
```
[16]: datingDataMat
```

```
[16]: [3, 2, 1, 1, 1, 1, 3, 3, 1, 3, 1, 1, 2, 1, 1, 1, 1, 2, 3]
```

```
[14]: datingLabels[0:20]
```

```
[14]: [3, 2, 1, 1, 1, 1, 3, 3, 1, 3, 1, 1, 2, 1, 1, 1, 1, 2, 3]
```

```
[17]: import matplotlib  
import matplotlib.pyplot as plt  
fig = plt.figure()  
ax = fig.add_subplot(111)  
ax.scatter(datingDataMat[:,1], datingDataMat[:,2])  
plt.show()
```



```
[18]: ax.scatter(datingDataMat[:,1], datingDataMat[:,2],15.0*array(datingLabels), 15.
      ↪0*array(datingLabels))
```

```
[18]: <matplotlib.collections.PathCollection at 0x7f613924ce50>
```

```
[21]: normMat, ranges, minVals = kNN.autoNorm(datingDataMat)
```

```
[22]: kNN.classifyPerson()
```

```
percentage of time spent playing video games?2
frequent flier miles earned per year?100
liters of ice cream consumed per year?10
You will probably like this person: in small doses
```

```
[ ]:
```