

```
c743h357@cycle3:~/EECS658/ChetanHiremath_Assignment6$ python
```

```
UnsupervisedML.py
```

```
K-MEANS CLUSTERING:
```

```
K-MEANS CLUSTERING: k = elbow_k
```

```
Accuracy: 0.8866666666666667
```

```
Confusion Matrix:
```

```
[[50  0  0]
 [ 0 47  3]
 [ 0 14 36]]
```

```
K-MEANS CLUSTERING: k = 3
```

```
Accuracy: 0.8866666666666667
```

```
Confusion Matrix:
```

```
[[50  0  0]
 [ 0 47  3]
 [ 0 14 36]]
```

```
GAUSSIAN MIXTURE MODELS (GMM):
```

```
GAUSSIAN MIXTURE MODEL: k = aic_elbow_k
```

```
Accuracy: 0.9
```

```
Confusion Matrix:
```

```
[[50  0  0]
 [ 0 49  1]
 [ 0 14 36]]
```

```
GAUSSIAN MIXTURE MODEL: k = bic_elbow_k
```

```
Accuracy: Cannot calculate Accuracy Score because the number of classes is  
not the same as the number of clusters
```

```
Confusion Matrix:
```

```
[[ 0 50  0  0]
 [23  0  0 27]
 [ 0  0 35 15]
 [ 0  0  0  0]]
```

```
GAUSSIAN MIXTURE MODEL: k = 3
```

```
Accuracy: 0.9
```

```
Confusion Matrix:
```

```
[[50  0  0]
 [ 0 49  1]
 [ 0 14 36]]
```

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