COMP4431 Lab assignment 2

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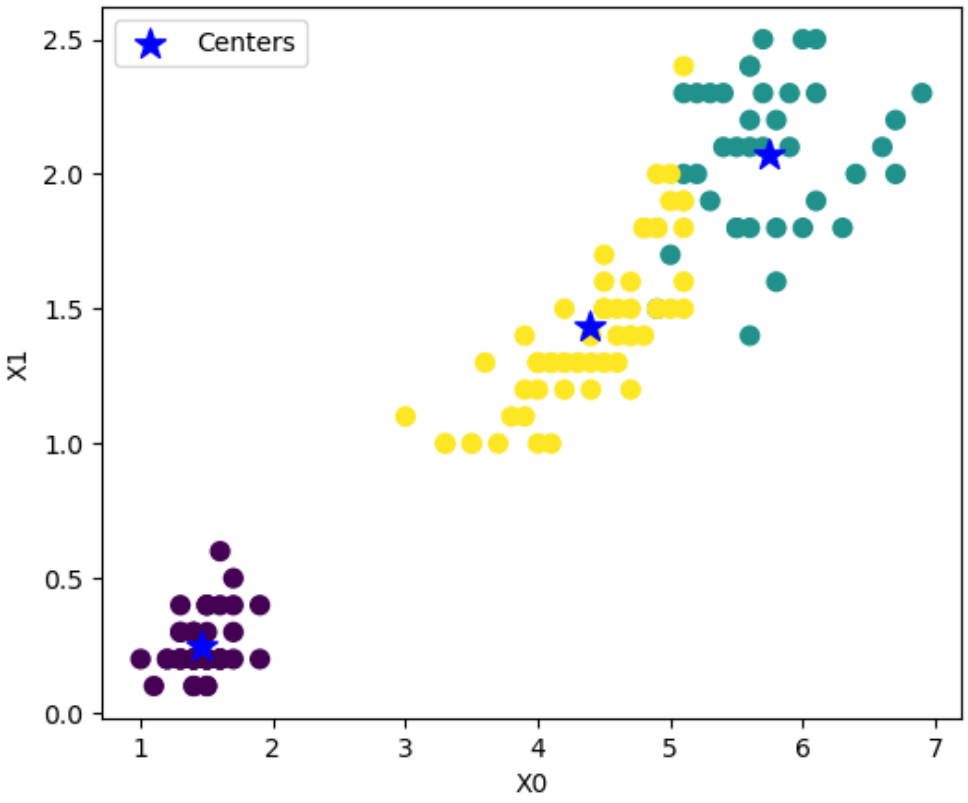
1. K-means with sklearn for 3 clusters

a. Find the centroids:

The Centroids Of Source whose cluster is 3 :

```
[[5.006      3.428      1.462      0.246     ]
 [6.85       3.07368421 5.74210526 2.07105263]
 [5.9016129  2.7483871  4.39354839 1.43387097]]
```

b. Use the Matplotlib to visualize the clustering results:

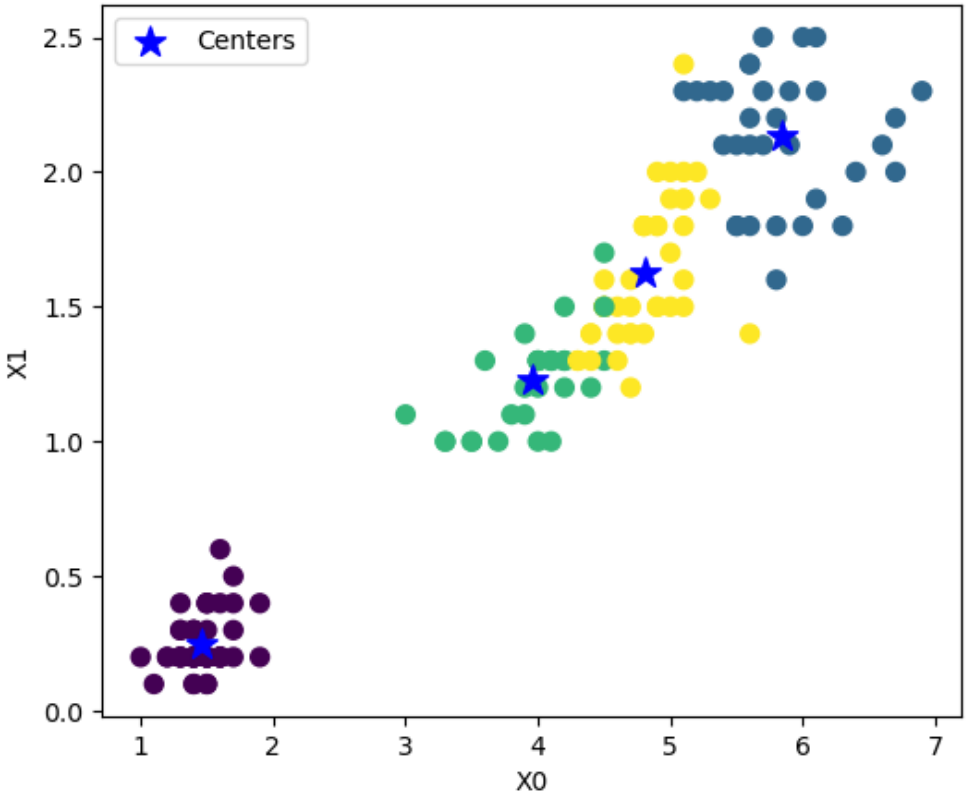


2. K-means with sklearn for 4 clusters

a. Find the centroids:

The Centroids Of Source whose cluster is 4 :
[[5.006 3.428 1.462 0.246]
[6.9125 3.1 5.846875 2.13125]
[5.53214286 2.63571429 3.96071429 1.22857143]
[6.2525 2.855 4.815 1.625]]

b. Use the Matplotlib to visualize the clustering results:

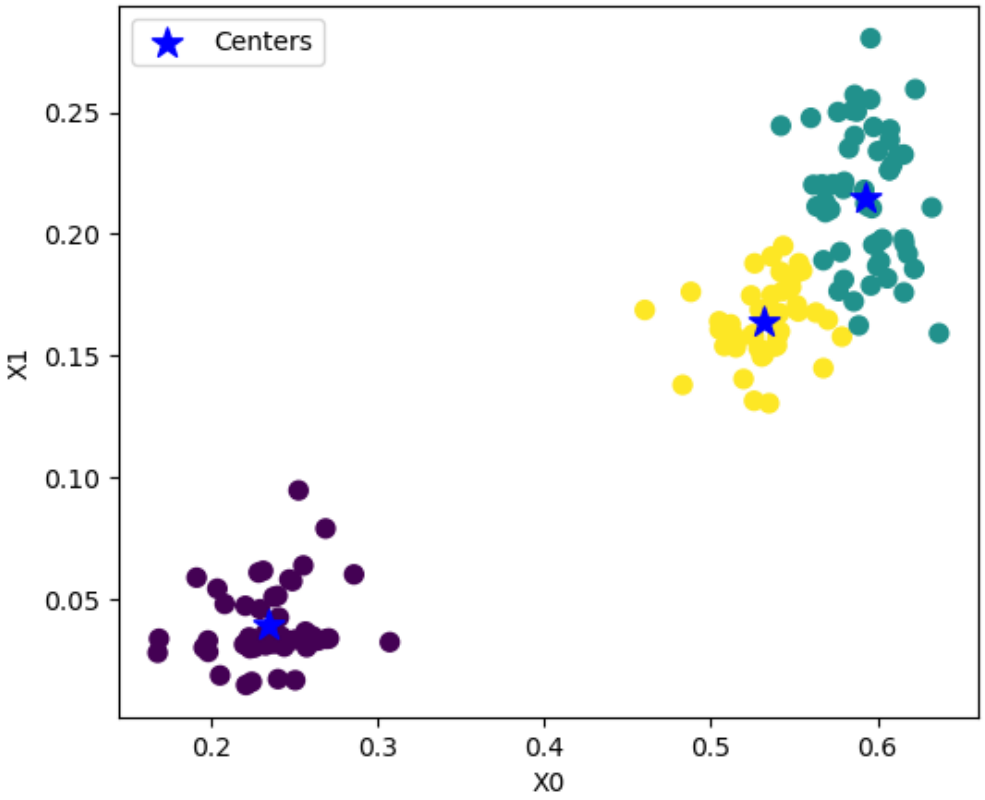


3. K-means with sklearn for 3 clusters, normalized

a. Find the centroids:

The Centroids Of Normalized Source whose cluster is 3 :
[[0.80113979 0.5472692 0.23440877 0.03917808]
 [0.70495129 0.32178747 0.59235975 0.21499323]
 [0.75290517 0.34920791 0.53149597 0.16393735]]

b. Use the Matplotlib to visualize the clustering results:



4. K-means with sklearn for 4 clusters, normalized

a. Find the centroids:

The Centroids Of Normalized Source whose cluster is 4 :
[[0.69792651 0.33739007 0.58834889 0.22665026]
 [0.80113979 0.5472692 0.23440877 0.03917808]
 [0.75264296 0.35097959 0.53096549 0.16345989]
 [0.72176224 0.28874378 0.59819549 0.19071126]]

b. Use the Matplotlib to visualize the clustering results: