Scikitlearn and Machine Learning

Python

Unsupervised learning and Clustering

- K-means as a clustering algorithms works with centroid.
- Sckitlearn returns the location of centroid using ***model.cluster_centers_***

```
kmeans = KMeans(n_clusters=2, random_state=4, max_iter=2, init = 'k-means++' ).fit(dt)
#    print(kmeans.cluster_centers_)
#    print(kmeans.inertia_)  accuracy

    YY = kmeans.labels_
    plt.scatter(dt["bank_arg2"],dt["bank_arg1"], c= YY)
    plt.scatter(kmeans.cluster_centers_[0][0],kmeans.cluster_centers_[0][1])
    plt.scatter(kmeans.cluster_centers_[1][0],kmeans.cluster_centers_[1][1])
```

Supervised learning (classification)

- Continuous values are not appropriate for classification.
- In order to use attributes with continuous values in classification, first you need to discretize the data into a number of buckets.
- The below example uses **5 buckets** to equally discretize the continuous values.