kmeans clustering

May 20, 2023

[22]:
```
import warnings
```

[23]:
```
warnings.filterwarnings('ignore')
```

[24]:
```
import numpy as np
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[25]:
```
import pandas as pd
```

[26]:
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from sklearn import datasets
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[27]:
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from sklearn.cluster import KMeans
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[28]:
```
import matplotlib.pyplot as plt
```

[29]:
```
iris = datasets.load_iris()
```

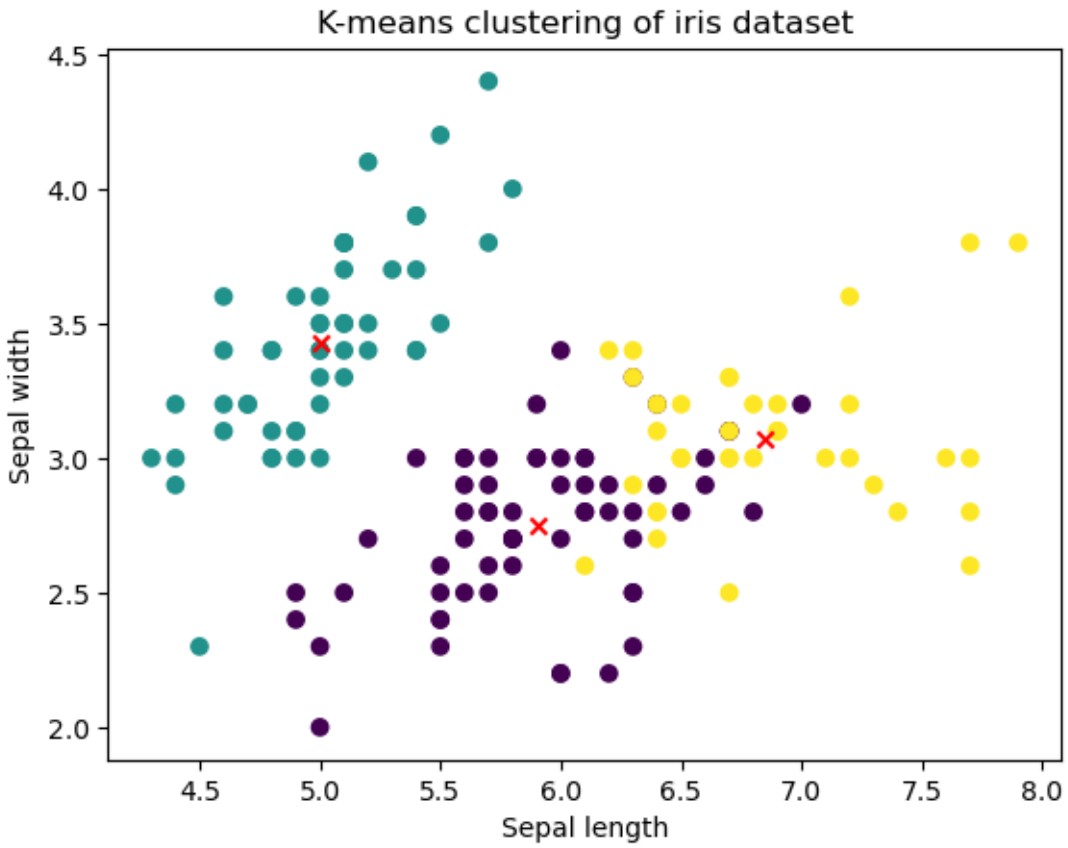
[30]:
```
X = iris.data
```

[54]:
```
kmeans = KMeans(n_clusters=3, random_state=0)
```

[55]:
```
kmeans.fit(X)
```

[55]:
```
KMeans(n_clusters=3, random_state=0)
```

[56]:
```
plt.scatter(X[:, 0], X[:, 1], c=kmeans.labels_, cmap='viridis')
plt.scatter(kmeans.cluster_centers_[:, 0], kmeans.cluster_centers_[:, 1],␣
 ↪c='red', marker='x')
plt.xlabel('Sepal length')
plt.ylabel('Sepal width')
plt.title('K-means clustering of iris dataset')
plt.show()
```


K-means clustering of iris dataset
Sepal width
Sepal length
4.5
4.0
3.5
3.0
2.5
2.0
4.5
5.0
5.5
6.0
6.5
7.0
7.5
8.0

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