

K-Means Clustering

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In [6]: import pandas as pd
from sklearn.cluster import KMeans
import matplotlib.pyplot as plt

dataset = pd.read_csv('datasets/IRIS_DATASET.csv')

X = dataset.iloc[:, :2].values

kmeans = KMeans(
    n_clusters=3,
    random_state=0,
)

kmeans.fit(X)

print(f'\n\nOUTPUT : \n\nCentroids : \n{kmeans.cluster_centers_}\n\n')

labels = kmeans.predict(X)

plt.figure(figsize=(5, 3))
plt.scatter(X[:, 0], X[:, 1], c=labels, cmap='viridis', edgecolor='k', marker='o', s=50)
plt.scatter(kmeans.cluster_centers_[:, 0], kmeans.cluster_centers_[:, 1], s=150, c='red', m
plt.xlabel('Feature 1')
plt.ylabel('Feature 2')
plt.title('KMeans Clustering (First 2 Features)')
plt.show()
```

OUTPUT :

```
Centroids :
[[5.79038462 2.69615385]
 [6.81276596 3.07446809]
 [5.00392157 3.4        ]]
```

