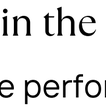
Stars, Tins & Clusters

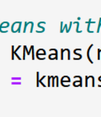
K-means

Prompts



- Perform K-means on my dataset

Strategy



- Prepare the data
- Perform K-means
- Plot results

Code & Results

1. Prepare the data

This code scales the features.

```
from sklearn.preprocessing import StandardScaler

# --- Scale the data ---
scaler = StandardScaler()
data_scaled = scaler.fit_transform(data)
```

2. Train the Model

This code performs K-means.

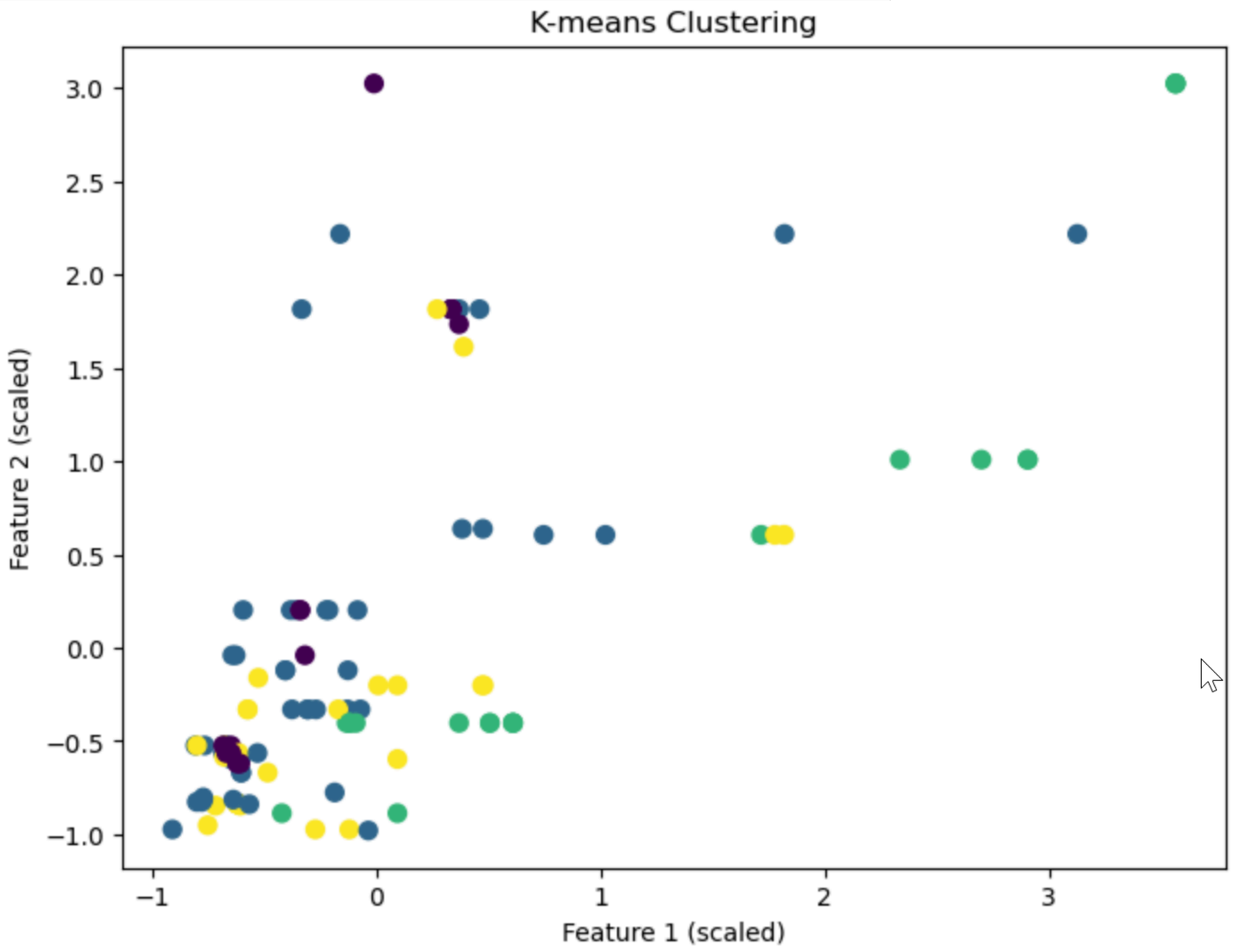
```
from sklearn.cluster import KMeans
import matplotlib.pyplot as plt

# Run KMeans with, for example, 4 clusters
kmeans = KMeans(n_clusters=4, random_state=42, n_init=10)
clusters = kmeans.fit_predict(data_scaled)

# Add cluster labels to your DataFrame
data['Cluster'] = clusters
```

This code plots two features for visualization.

```
# Plot two features just for visualization (choose any two)
plt.figure(figsize=(8,6))
plt.scatter(data_scaled[:, 0], data_scaled[:, 1], c=clusters, cmap='viridis', s=50)
plt.title("K-means Clustering")
plt.xlabel("Feature 1 (scaled)")
plt.ylabel("Feature 2 (scaled)")
plt.show()
```



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Book: https://www.amazon.com/dp/B0CW9SFYXF