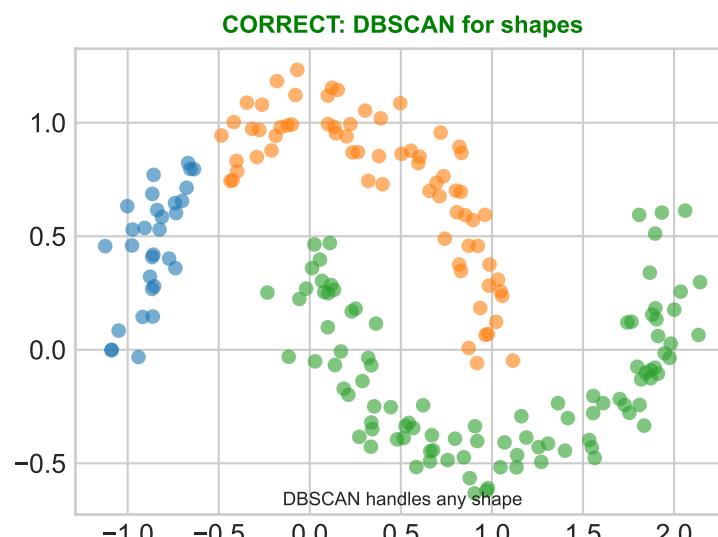
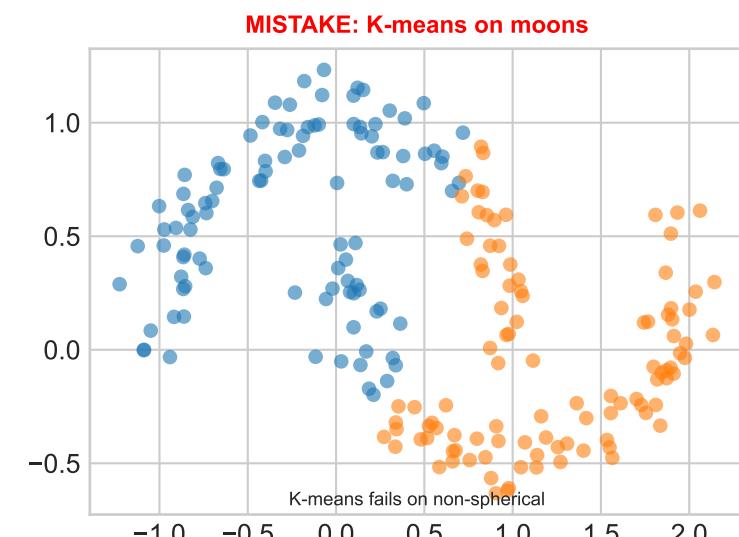
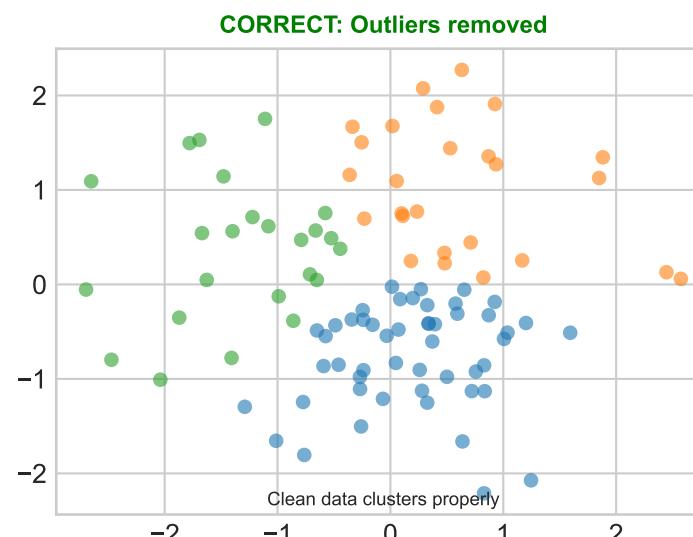
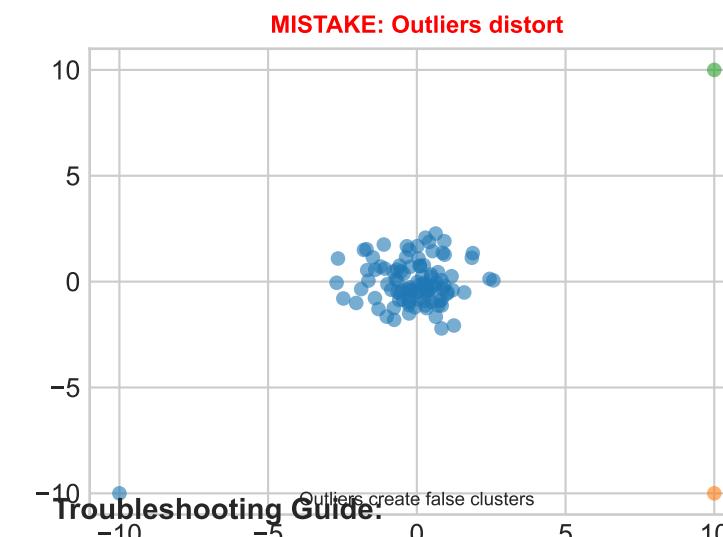
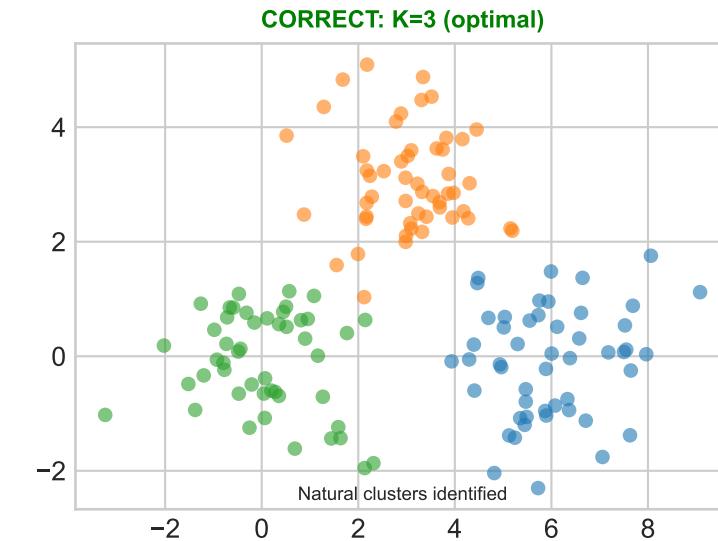
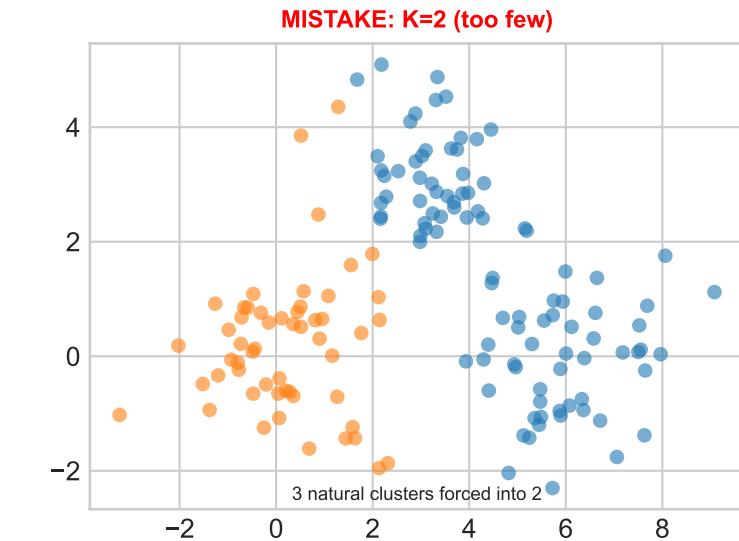
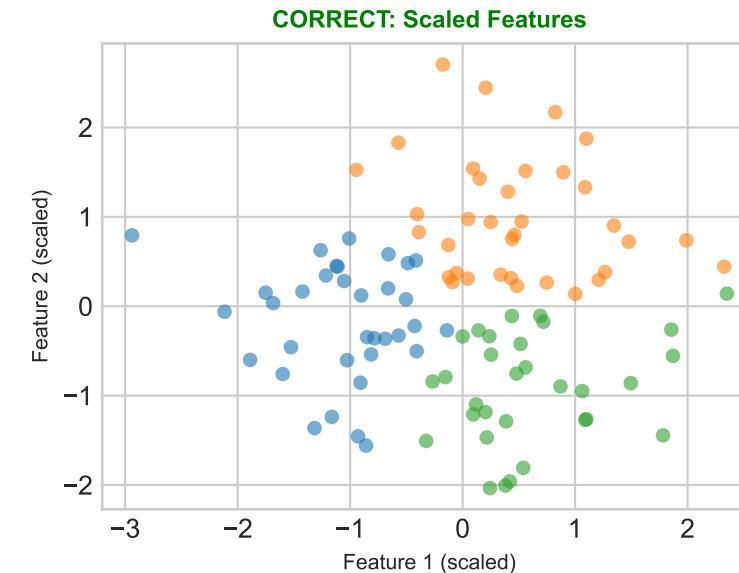
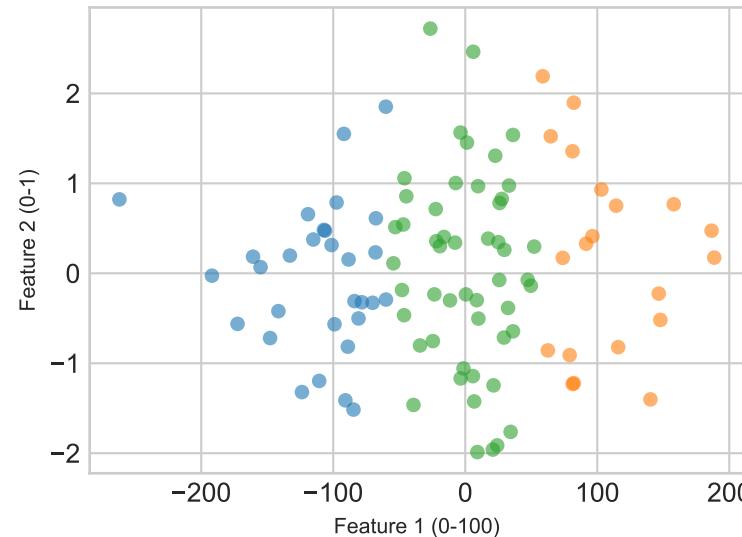


Common Clustering Mistakes & Troubleshooting Guide

Learn from These Mistakes to Master Clustering

Visual Examples of Common Mistakes:



Problem

Symptoms

Solution

Prevention

Poor separation

GOLDEN RULES:

1. Always scale your features
2. Visualize before clustering
3. Try multiple algorithms
4. Validate with domain knowledge
5. Check cluster stability

Unbalanced clusters

Low silhouette score

Different runs = different clusters

Takes too long to converge

One huge, others tiny

WARNING SIGNS:

- * Silhouette < 0.3
- * Clusters change each run
- * Single point clusters
- * All points in one cluster

Try different K or algorithm

Set random_state, increase n_init

Reduce features, subsample data

Check for outliers, try GMM

Use elbow method

Use deterministic init

Batch K-means

Inspect data distribution

No convergence

Algorithm doesn't stop

Increase max_iter, check data

Normalize features first