



### Customer Segmentation

Group customers by behavior patterns



### Image Compression

Reduce dimensionality efficiently



### Document Clustering

Organize articles and papers



### Anomaly Detection

Fraud detection, intrusion detection



### Recommendation Systems

Find similar items without ratings



### Market Basket Analysis

Discover product associations



### Feature Engineering

Create better features for models



## Unsupervised Learning Applications



### Biological Analysis

Gene expression patterns