

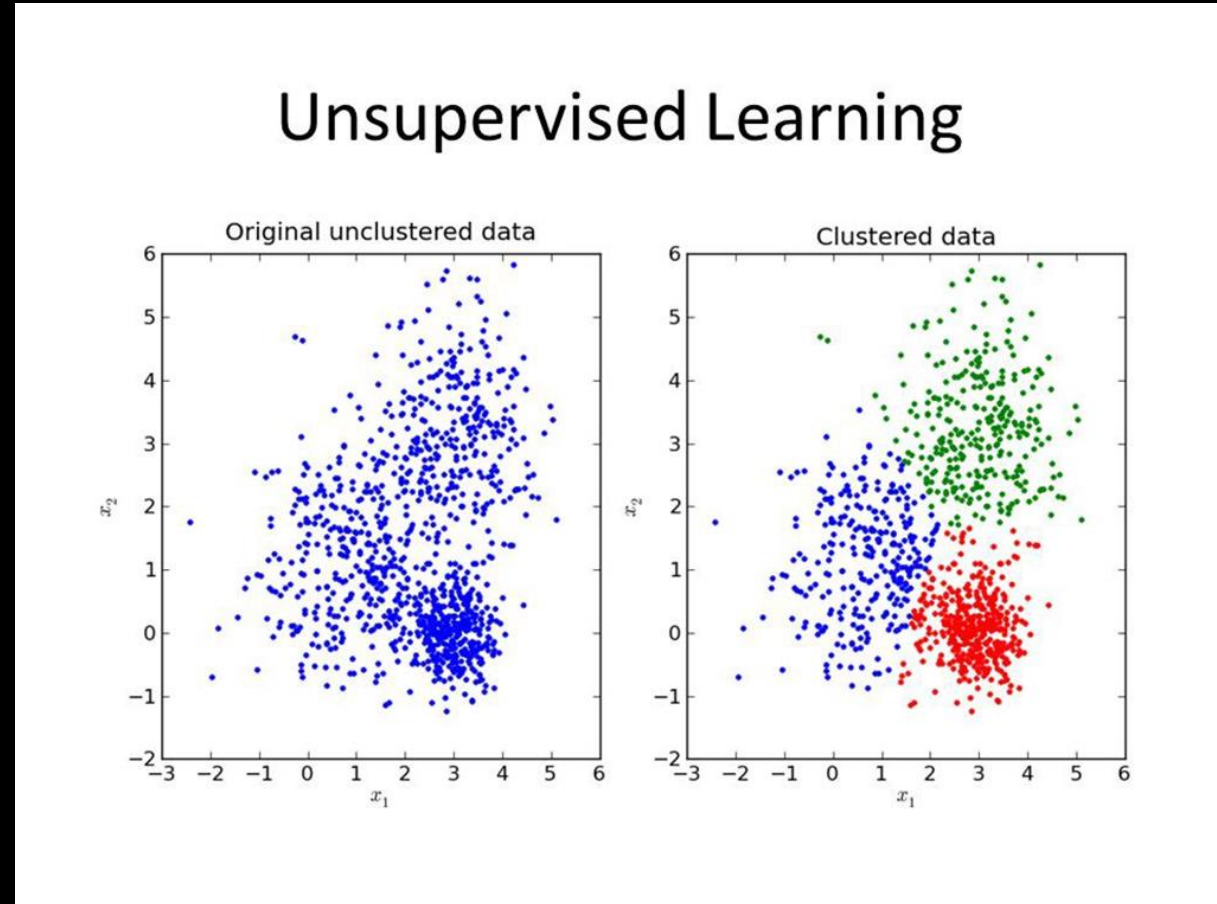
# Unsupervised Learning



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# Unsupervised learning Methods

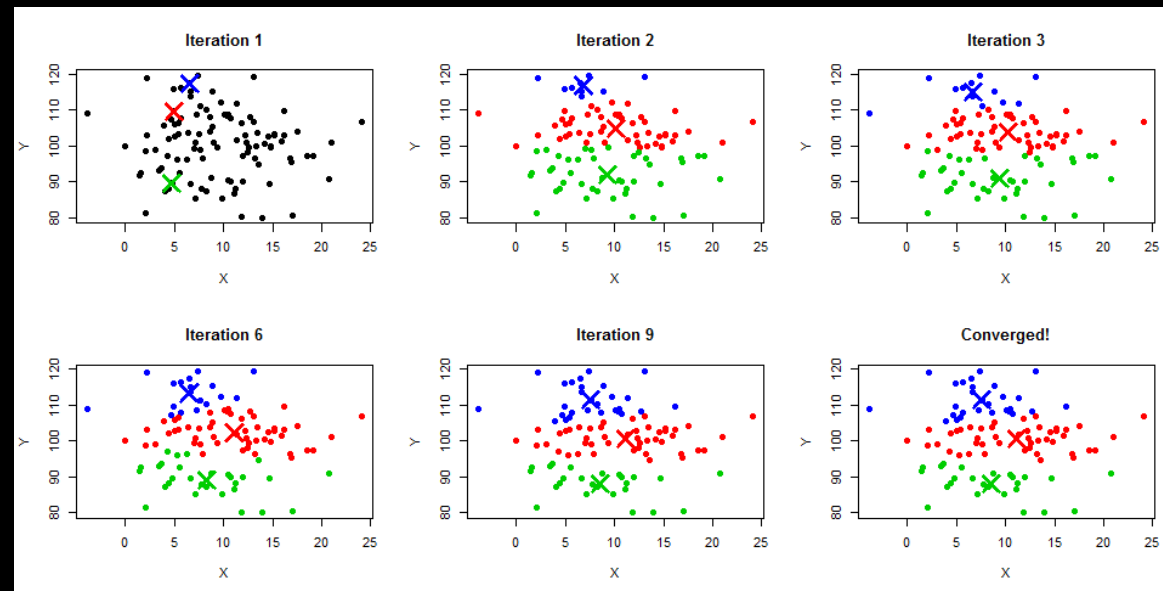
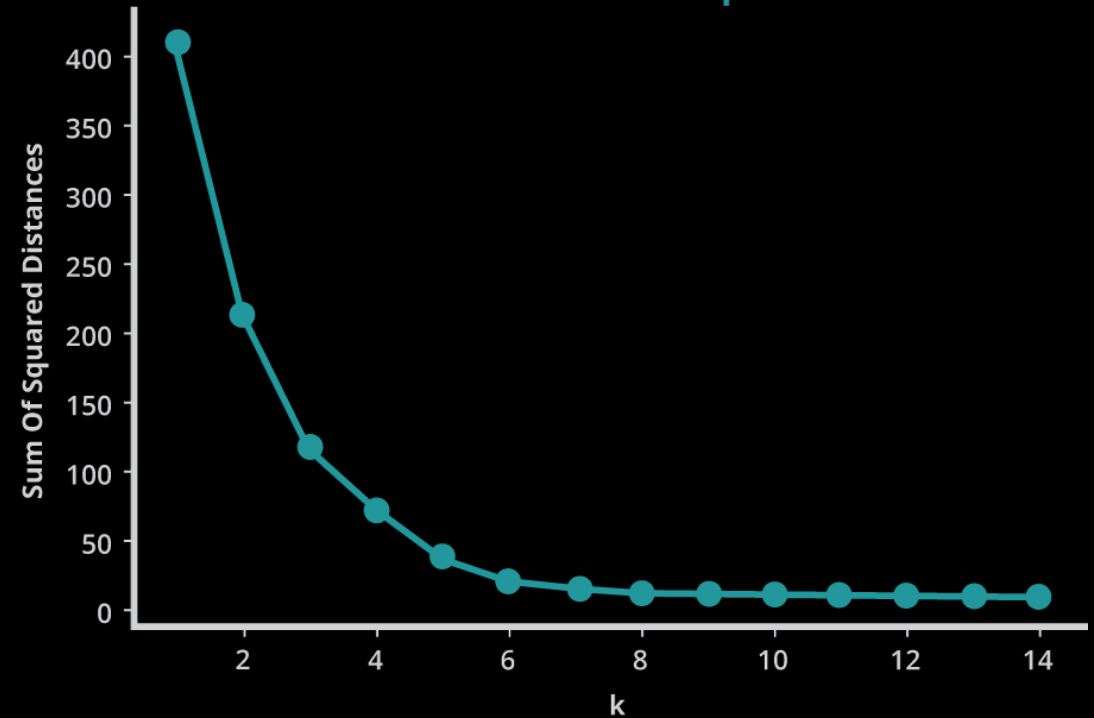
- Distance Grouping
- Hierarchical Clustering
- Dimensionality reduction



# K Means

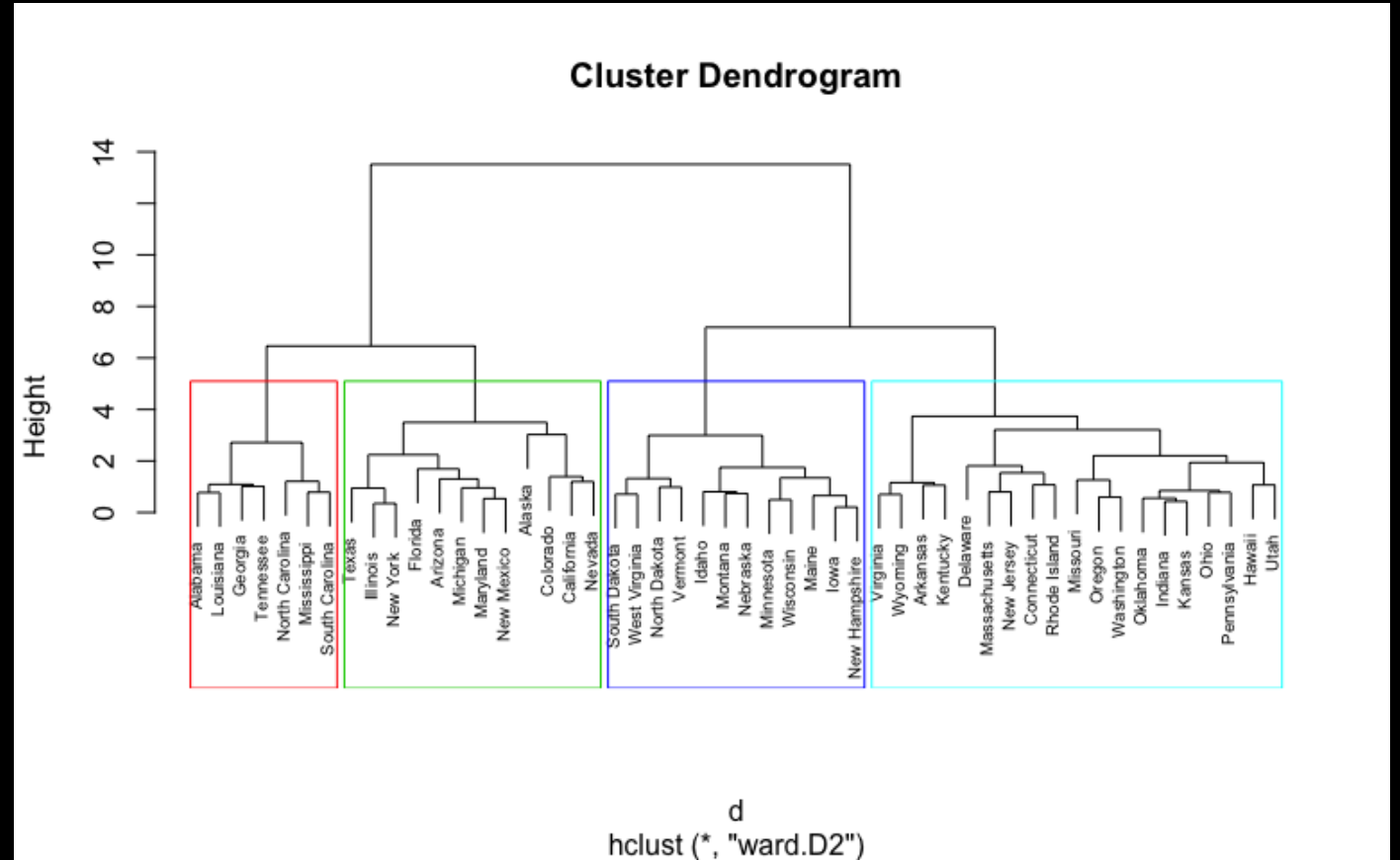
- Uses an iterative method to cluster data.
- Uses metric K to decide how many clusters to model.
- Uses a distance formula to find cluster centers.
- Uses Elbow method to find optimal K.

Elbow Method For Optimal k



# Hierarchical clustering

- Uses a distance metric to cluster like points together over and over.
- The groups form larger and larger groups until unique classes are formed.



# Dimensionality Reduction

- Reduced the dimension of data to reduce complexity.
- Removes redundant features.
- Remaps the data after reducing it.
- Can eliminate useful information.

## Dimensionality Reduction

