

## 9- clustering

unsupervised segmentation = grouping based, clustering

semantic segmentation = supervised, category-level

gestalt theory

↳ whole is greater than sum of its parts

↳ relationships among parts can yield new features

k-means = converges to local minimum → sensitive to outliers

↳ better for spherical data

\* elbow method can be used to

↳ need to pick number of clusters (k)

determine optimum k value

↳ can group pixels based on intensity, color, or texture.

for smooth clusters = group based on both <sup>(similarity)</sup> intensity and <sup>(proximity)</sup> position