

Tutorial 5: Clustering

1. Given two coordinate points $X = (1, 0, 5)$ and $Y = (2, 4, 9)$, find:
 - a. L_1 norm distance
 - b. L_2 norm distance
 - c. L_∞ norm distance

2. Given two strings $X = \text{"university"}$ and $Y = \text{"unversty"}$, calculate the edit distance between the two strings.

3. Suppose the data mining task is to use agglomerative clustering to group measurements of the variable *age*. $\text{Age} = \{18, 28, 22, 33, 40, 48\}$.

Commute the step-by-step agglomerative grouping using:

- a. Single link (nearest neighbor --- **min**), and
- b. Complete link (diameter --- **max**)