Distance Metric

K-NN Algorithm

- Hyperparameter
  - GridSearchCV
  - Raudamized SearchCV
- K → ∈ S → odd number

(x_1, y_1) P_1 ——— P_2 (x_2, y_2)

p = 2

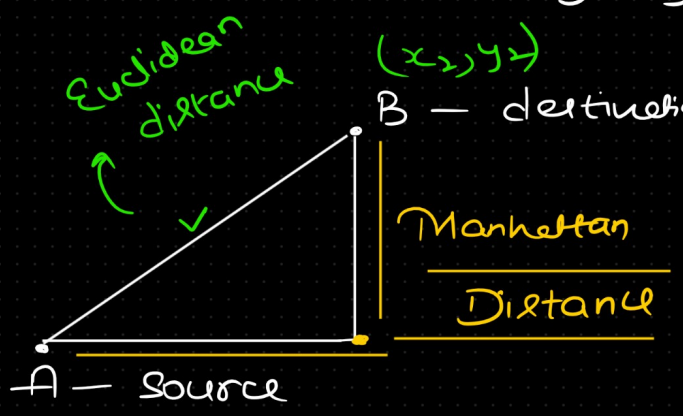
Numeric data

① Euclidean Distance

$$\sqrt{(x_2-x_1)^2+(y_2-y_1)^2}$$

② Manhattan Distance

$$|x_2-x_1| + |y_2-y_1|$$



categorical or binary

Hamming Distance

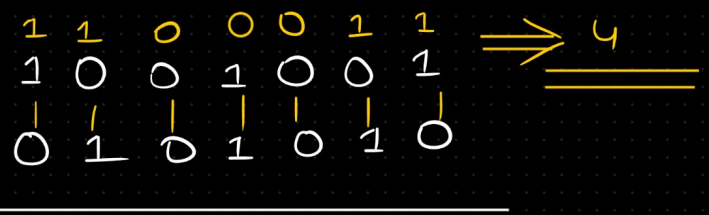
"a b c"
"d b c"

1 0 0

$$\sum_{i=1}^{2} 1_{x \neq y}$$

= 1

Distance


1 1 0 0 0 1 1
1 0 0 1 0 0 1
0 1 0 1 0 1 0
4