

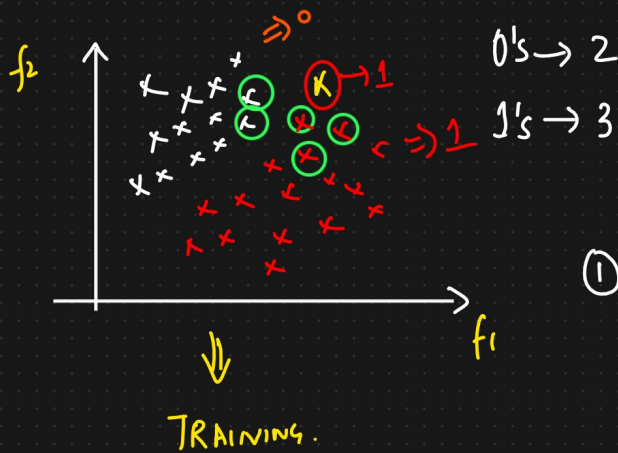
K Nearest Neighbour (KNN)

① Classification

② Regression

① Classification

K=5



f_1 f_2 y [Binary categories]

- - 0
1

① We have to initialize the K value

K=5

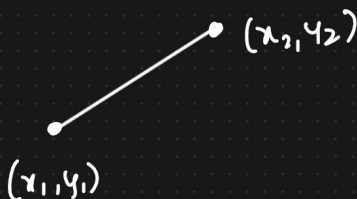
$K > 0 \dots \infty$

$K=1, 2, 3, 4, 5 \dots \Rightarrow$ hyperparameter

② Find the K Nearest Neighbour for
The Test Data.

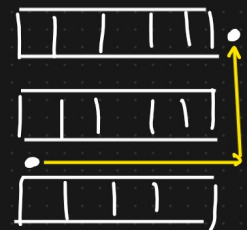
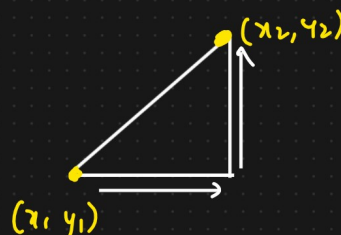
③ From those $K=5$ how many
neighbour belong to 0 category
and 1 category

① Euclidean Distance



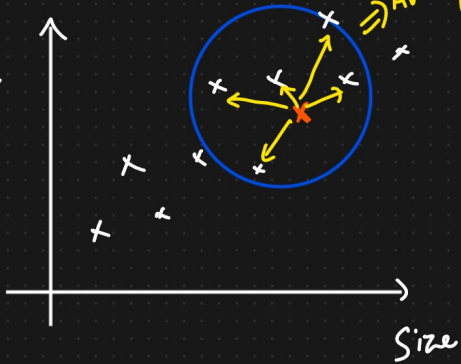
$$\text{Distance} = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

② Manhattan Distance

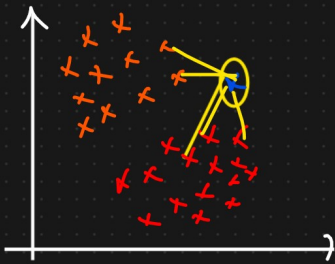


② Regression

House
price



Median
 \Rightarrow Average of all these
points to find out the
o/p,



Time complexity

$O(n) \Rightarrow$ Million of data point

{ ① KD Tree
② Ball Tree } \Rightarrow Optimize

\Downarrow
Binary Tree