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Recap

* Practical Imp. of Logistic Regression
* StandardScaler → feature Scaling Technique
* Practical Imp. Stan.Scaler

Agenda:

* KNN ML Algo.
* Practical Imp
* ---- ?

Standard Scaler :

* feature Scaling Technique

Step

(i) Import standard scaler

(ii) Creat object (sc)

(iii) apply fit() function on X_train

(iv) apply transform() function on X_train & X_test both

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list1 = [100/10, 200/10, 300/10, 400/10, 500/10]

list2 = [10, 20, 30, 40, 50] ← Same Important

formula :

$$\text{new value} = \frac{\text{old value} - \text{mean}}{\text{standard deviation } (\sigma)}$$

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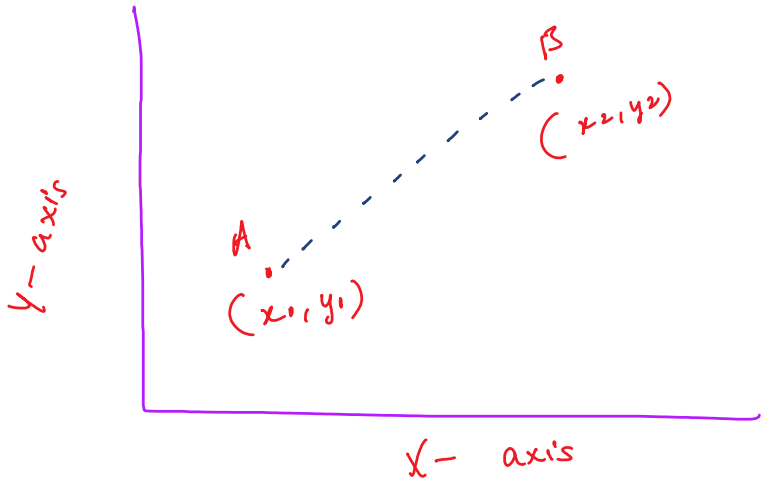
KNN ML Model

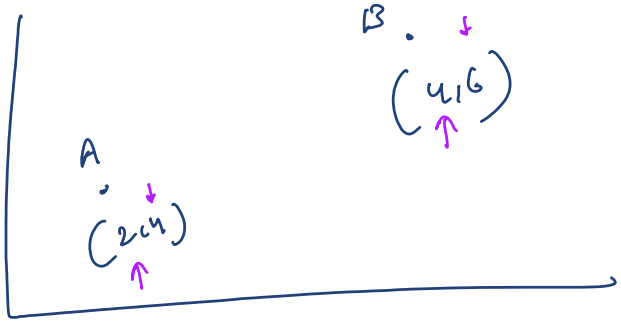
* It is a Supervised ML Algorithm.
* It is used to solve both Classification and Regression type of problem.
* KNN stands for K-Nearest Neighbour

How KNN works:



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

ex



$$dis(A\,\&\,B) = \sqrt{(4-2)^2 + (6-4)^2} = \sqrt{4+4} = \sqrt{8}$$

$$= 2\sqrt{2}$$

Ans

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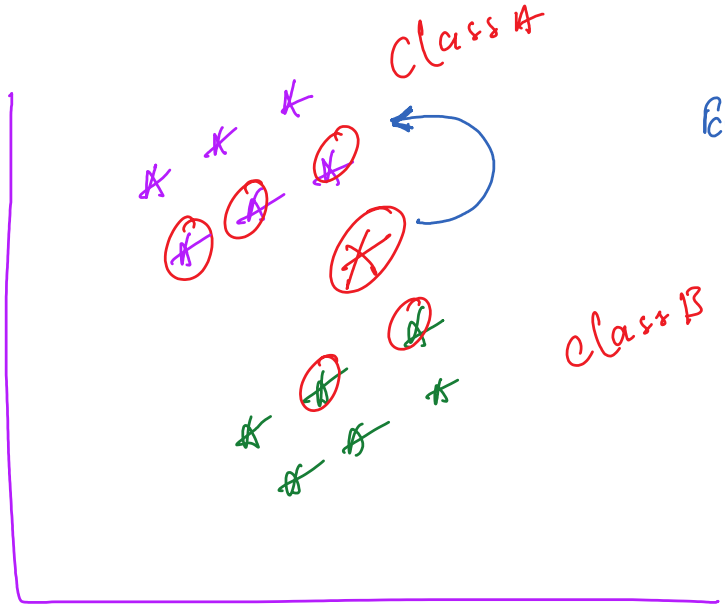
Classification

K = value

Let's say K = 5 nearest



Euclidian distance

Class A → 3

Class B → 2

Step:2 Majority voting Technique

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Regression :- Target value → Continous

(o/p)

ex Size | Room | Price (o/p)