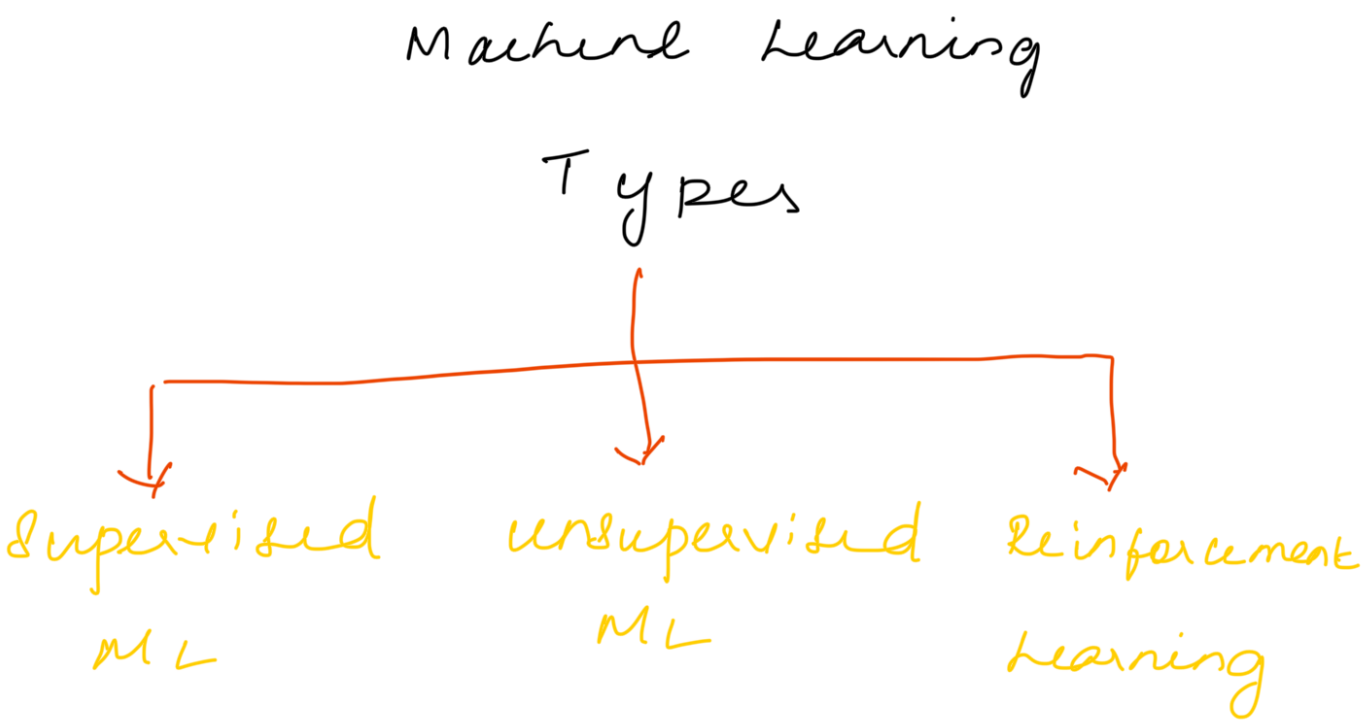
Types of Machine learning



1) Supervised ML Technique:

Task:

Predict house rent

Data set

Independent variable / Feature

Dependent / target

Size of house	# of rooms	Rent
5000 sq	5	450 k
6000 sq	6	500 k
-	-	-
-	-	-

Supervised ML Technique

- Regression
- classification

In regression : → The output dependent value / Target will be continous.

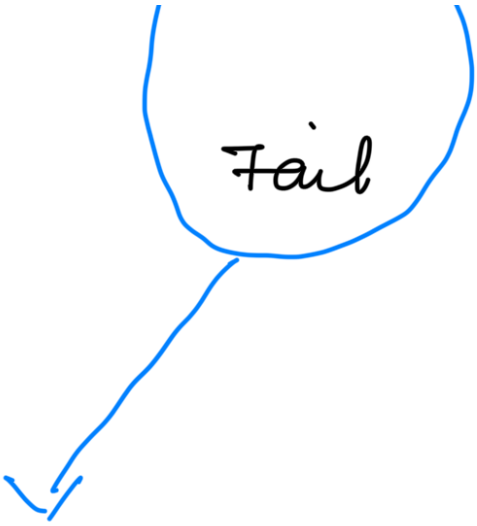
If the Dependent variable is categorical then It will be classification

classification

Independent variable — Dependent variable

No of study hours	No of play hours	Pass / Fail
7	3	Pass

2 6



Here we have fixed no. of classification, so we call it as Binary classification.

If we have more than two classification, then it is called as multi class classification.

Classification

(2) Un Supervised Machine learning

example: customer segmentation

whenever, we work with the unsupervised ML, we do not know the output / Target feature or dependent variable.

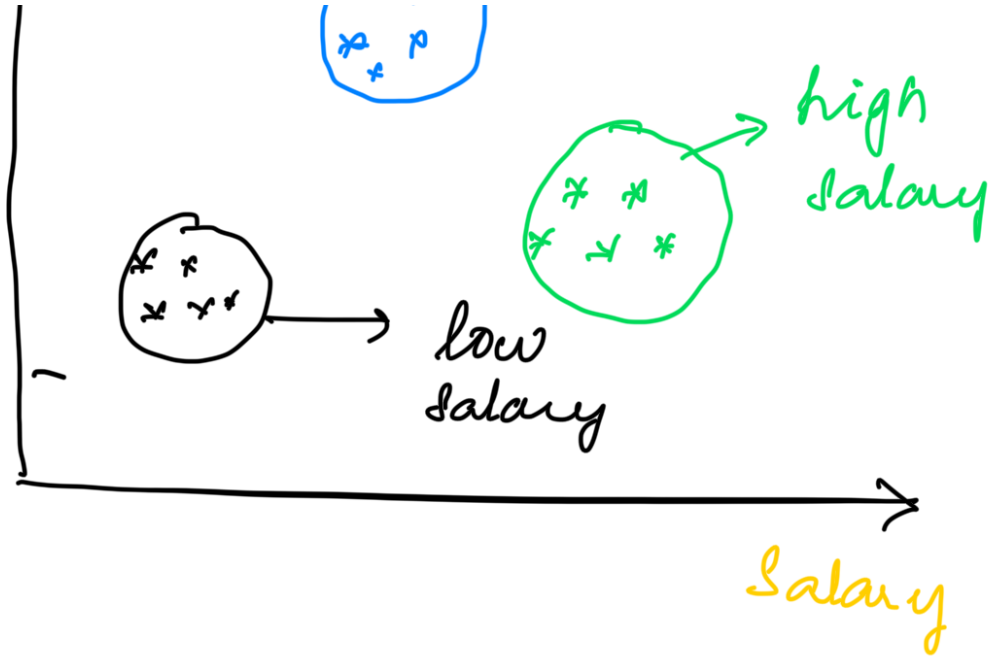
we no need to predict

Highly, instead we need to find out similar cluster or groups.

Example:

Customer segmentation

Salary	Spending Score (1-10)
20000	9
45000	2
–	–
–	–
–	–



we group them as clusters

Supervised ML

1. Linear regression
2. Ridge & Lasso
3. Elastic net
4. Logistic Regression
5. Dession Tree]

Un Supervised ML

1. Kmean
2. Hirearical mean
3. DB scan clustring

⑥ Random Forest

⑦ Ada Boost

⑧ Xg Boost

We can solve both classification and regression Problem

Reinforcement learning

* Application learns by it self.