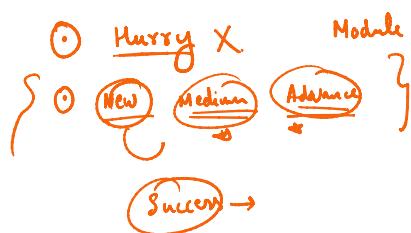
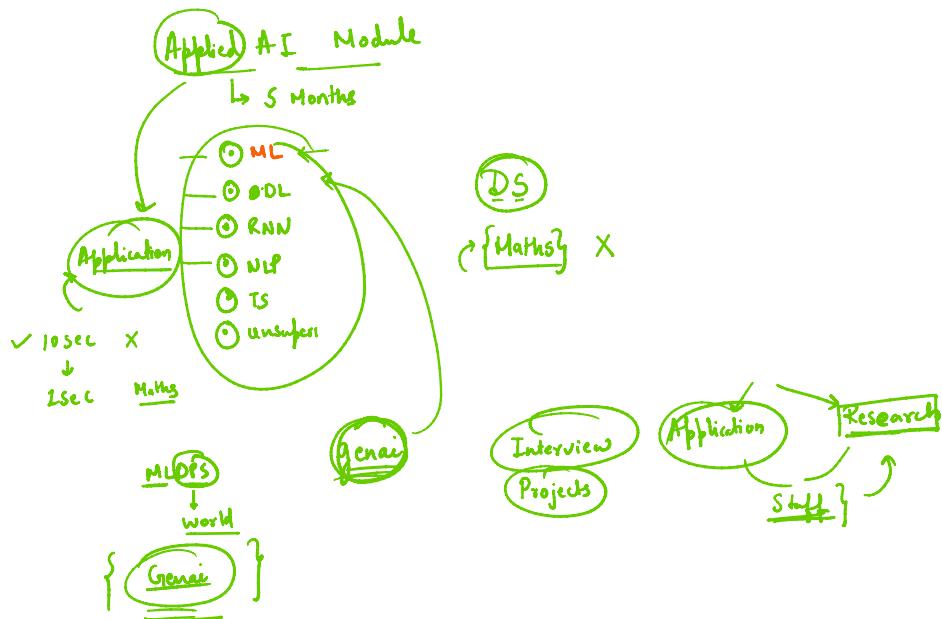




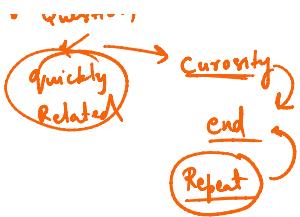
- 1. Doubts
- 2. Notes
- 3. Extra → work

Expect

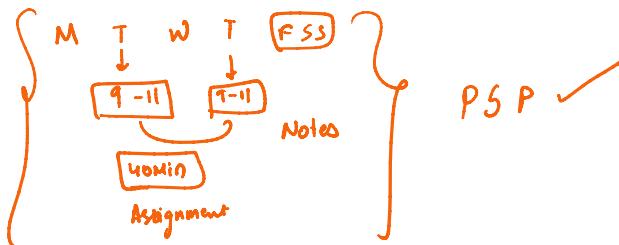
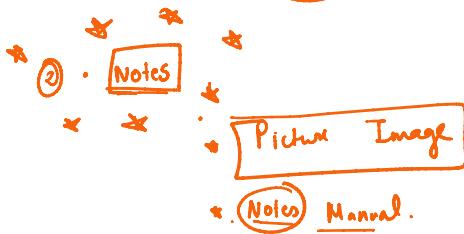


- ① Extra Session
- ② Projects /





① $\circ \rightarrow$ Doubts \rightarrow Extra \rightarrow 9545126535
 Doubt



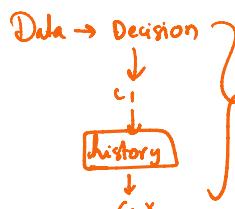
ML and LR

① Story.

Gruj C_1 \rightarrow SL / Month Married Male M
 SOL Loan

Rgn C_2 \rightarrow SL / year Married Male C

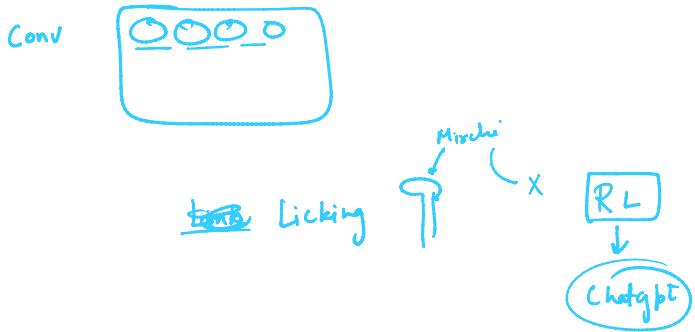
$C_1 \rightarrow$ Vijay Malya.
 C_2



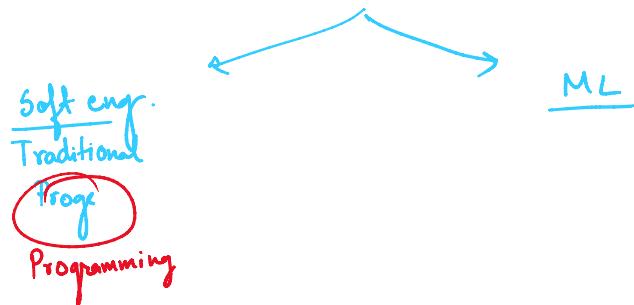
A

{ Human Learning = Machine Learning }

Inspired



{ Learn the pattern from history } Learning



① Program him to Make Maggie

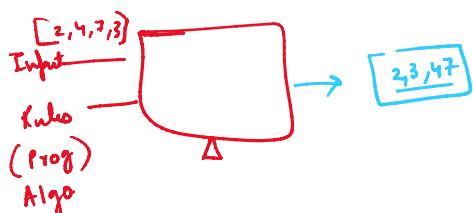
② Rules

- ① Take water
- ② Boil it
- ③ Add Masala
- ④ Add Maggie
- ⑤ Stir and wait

Task
Sort a list $\rightarrow [2, 7, 4, 3] - \text{Sort}$

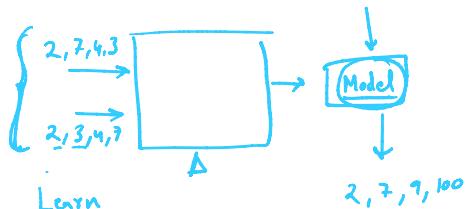
SE
TP

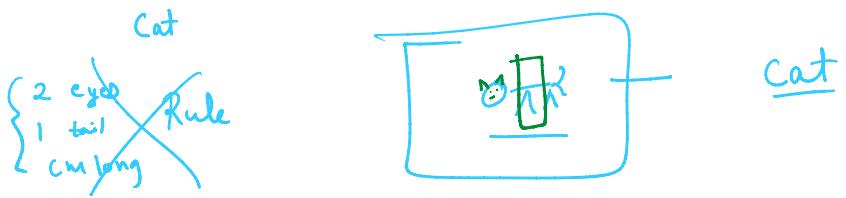
Rules
① Take two numbers
② compare
③ which is smaller swap it



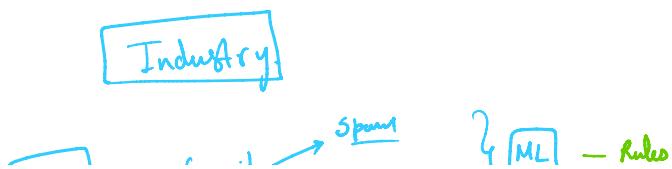
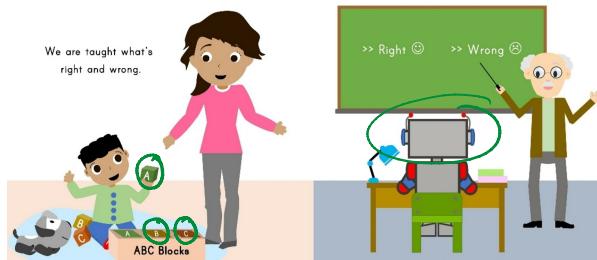
① Input $[2, 7, 4, 3]$
② Output $[2, 3, 4, 7]$

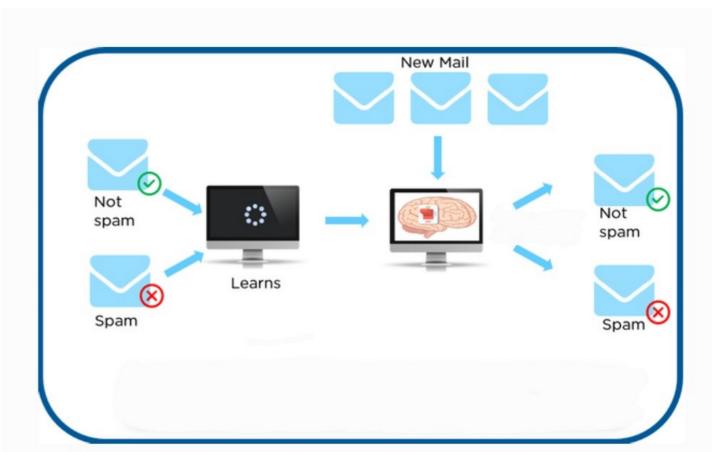
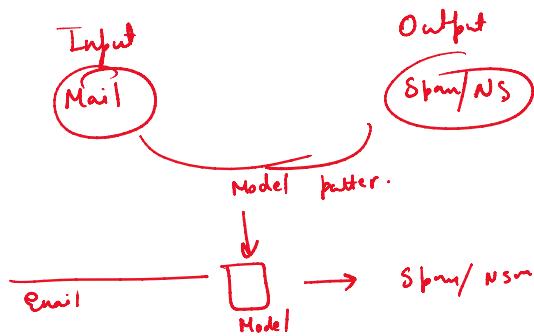
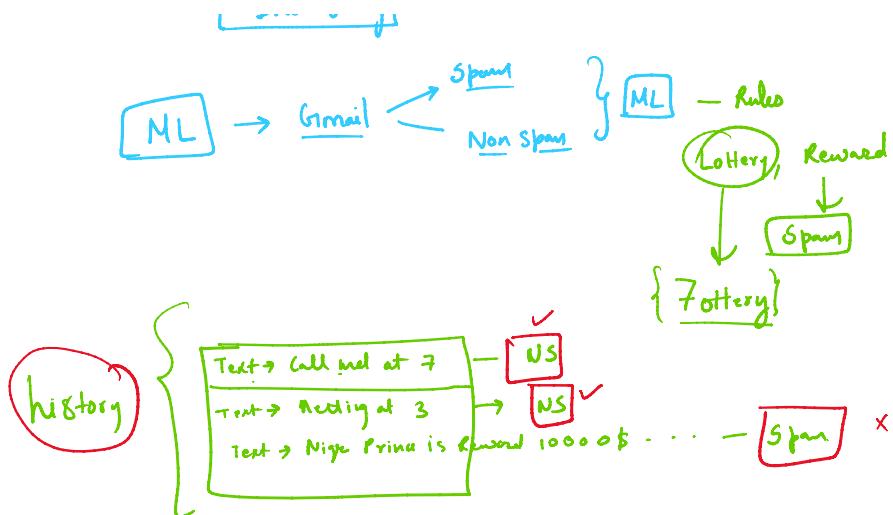
$2, 9, 10, 7$





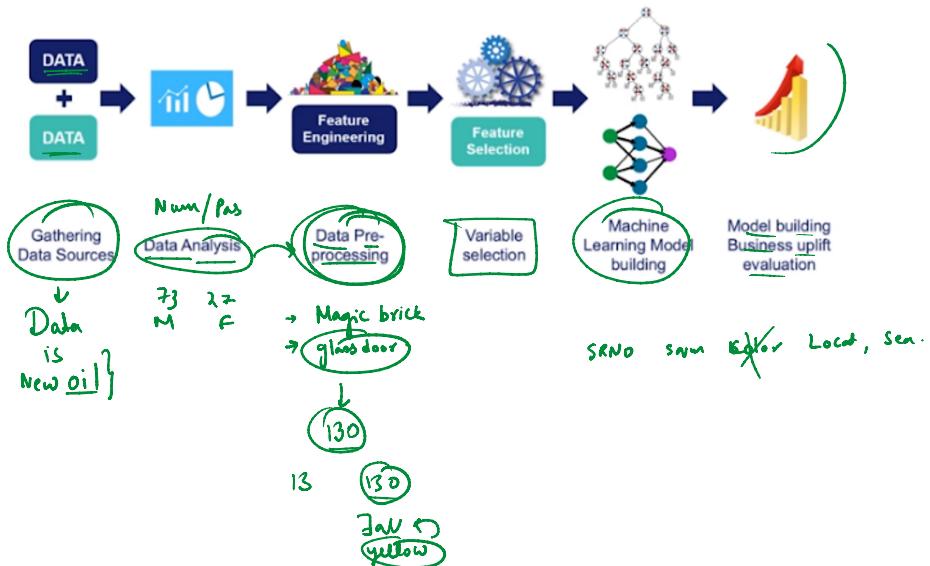
Machine learning is a branch of AI that allows systems to learn from data without being explicitly programmed



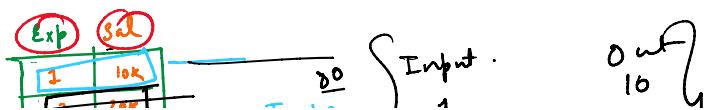
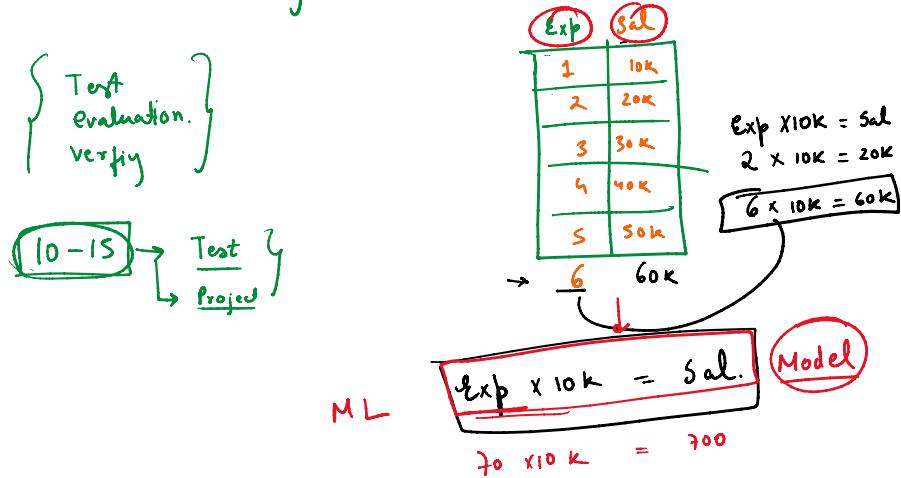


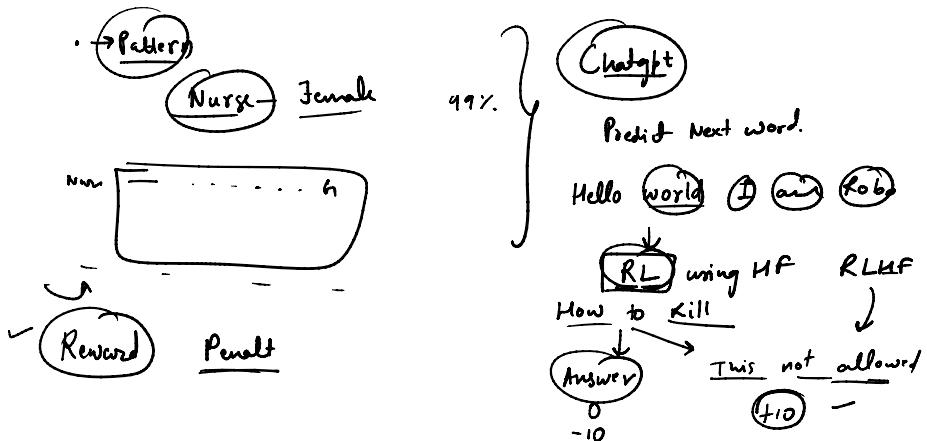
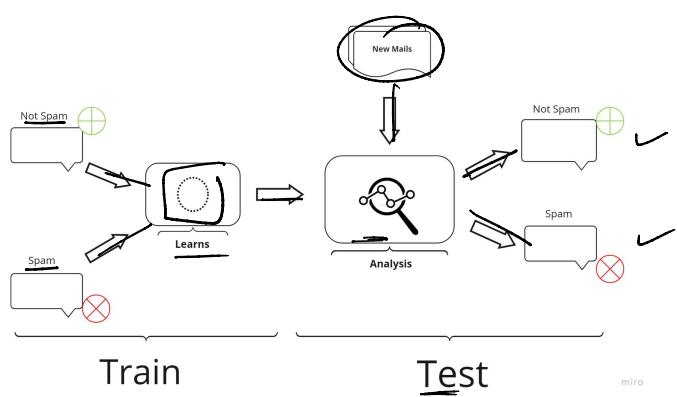
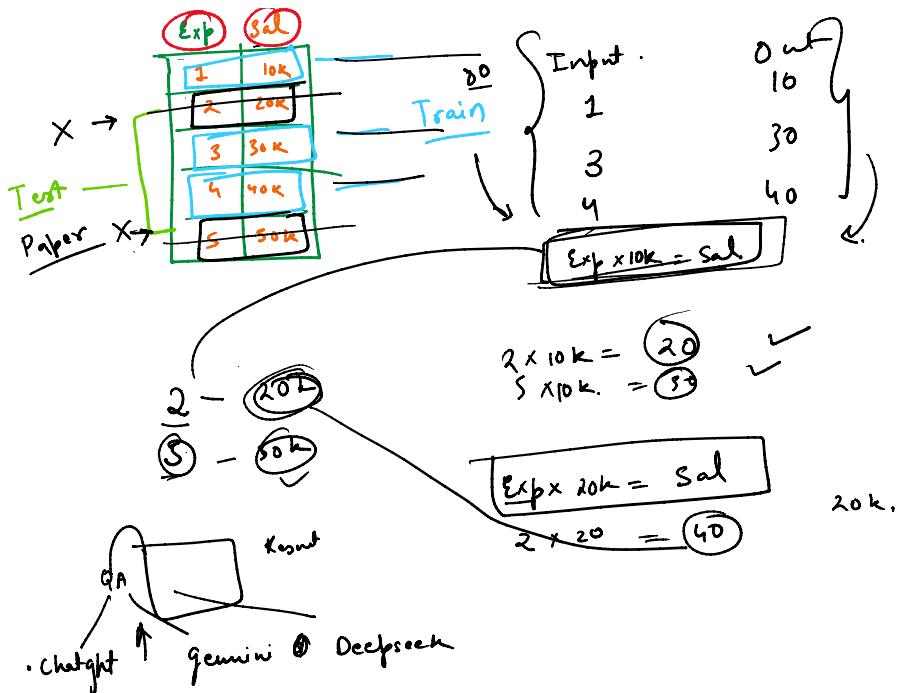
- ① Weather app ↑ history → ML
- ② Recommendation → * ML → Pattern
- ③ uber → A → B → fare TIME } ML

Machine Learning Pipeline: Overview



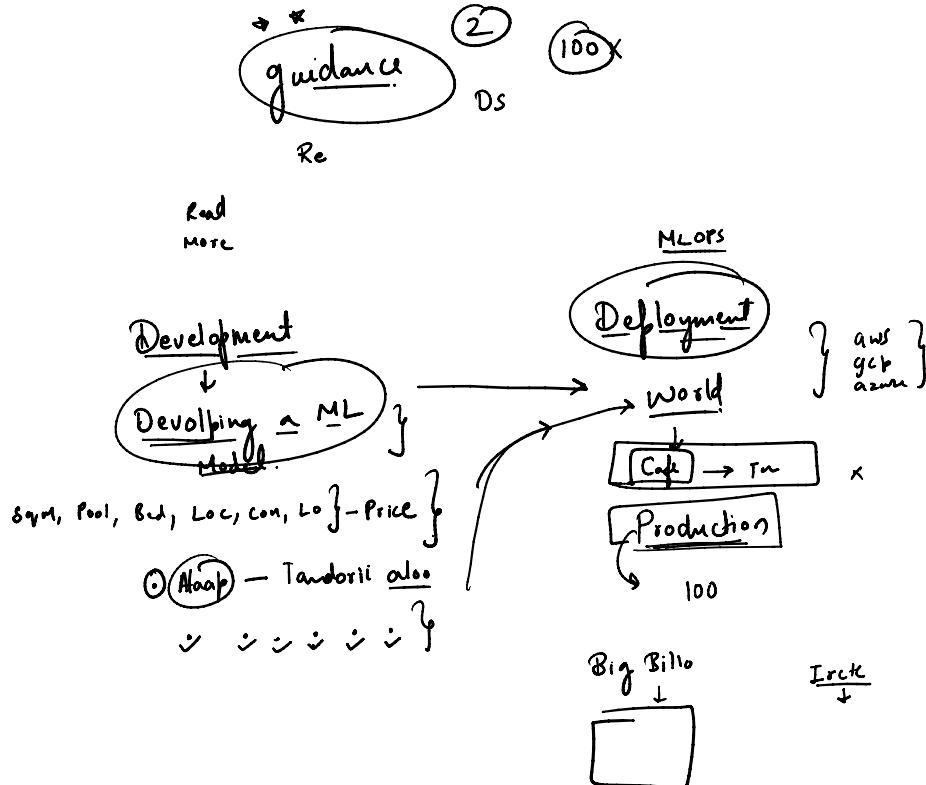
Human Learning = Machine Learning



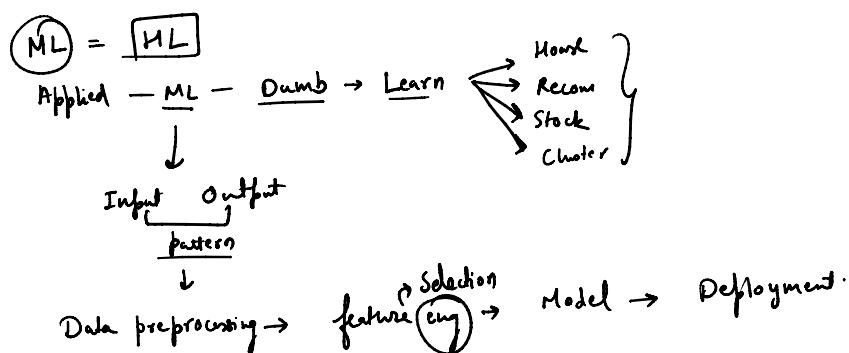
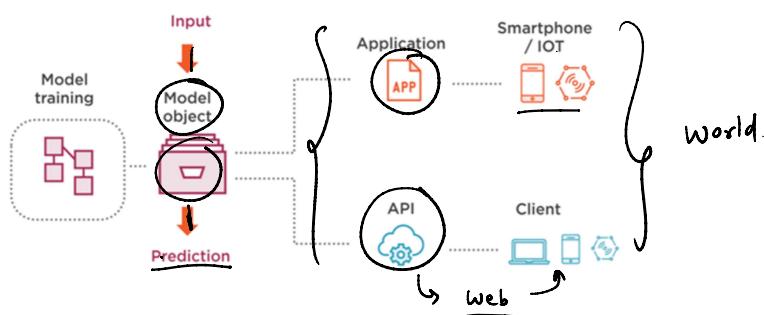


80 20
Train Test

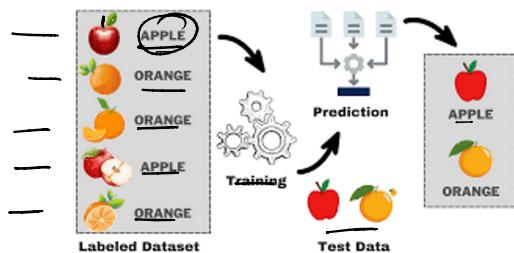
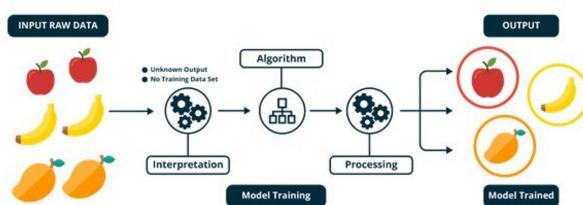
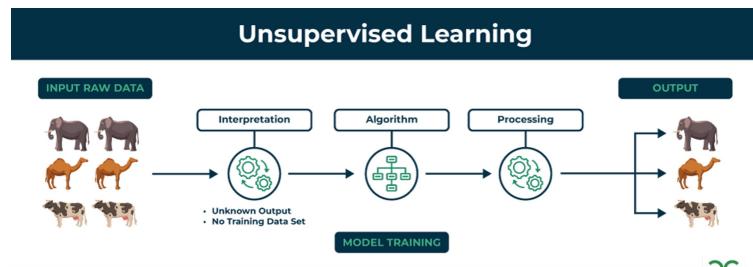
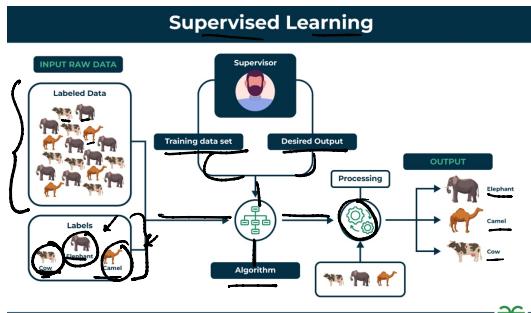
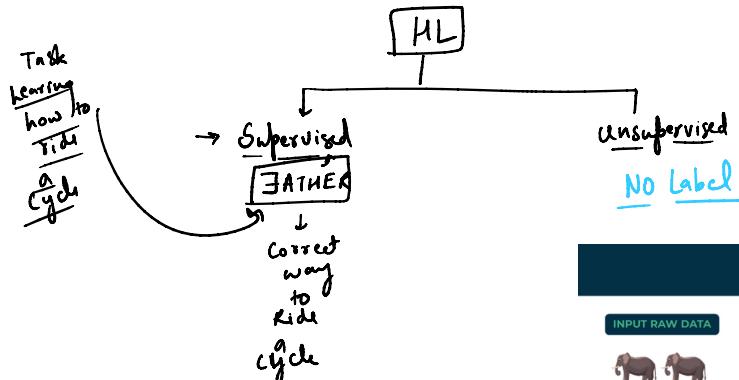
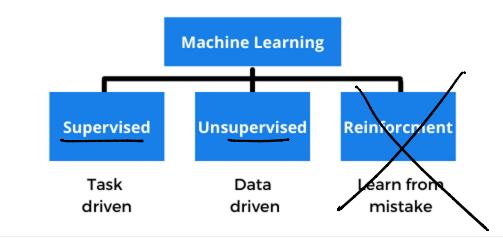
ML



Model Serving



Machine Learning



	Hour	Price
8am	3	0 1
1600	2	0 2
1700	7	1 3
7000		

feature.

Regression

Crowd → Rich

Act Rich/Poor

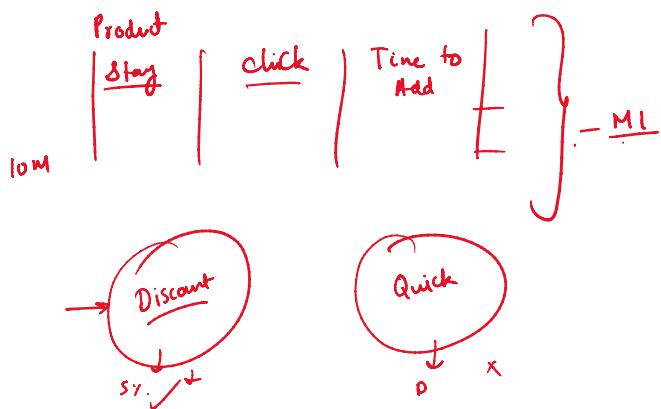
Pattern without label.

Text	Detection
Mail 1	Spam
Mail 2	Not
Mail 3	Spam
Mail 4	Spam
feature.	Label.

Classification.

Ch Large L M. Super RL un

→ Amazon



9. 11. 30

TO LEARN - Clustering

100M Amazon customers

- future customers
- \$
- location

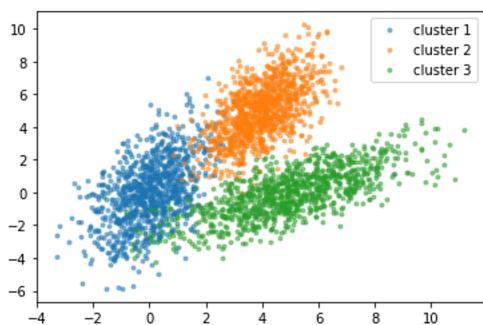
$D = \{x_i\}_{i=1}^m$

⇒ No y → Unsupervised ★★★

What?
→ Group similar customers

Why?
→ Use commonality

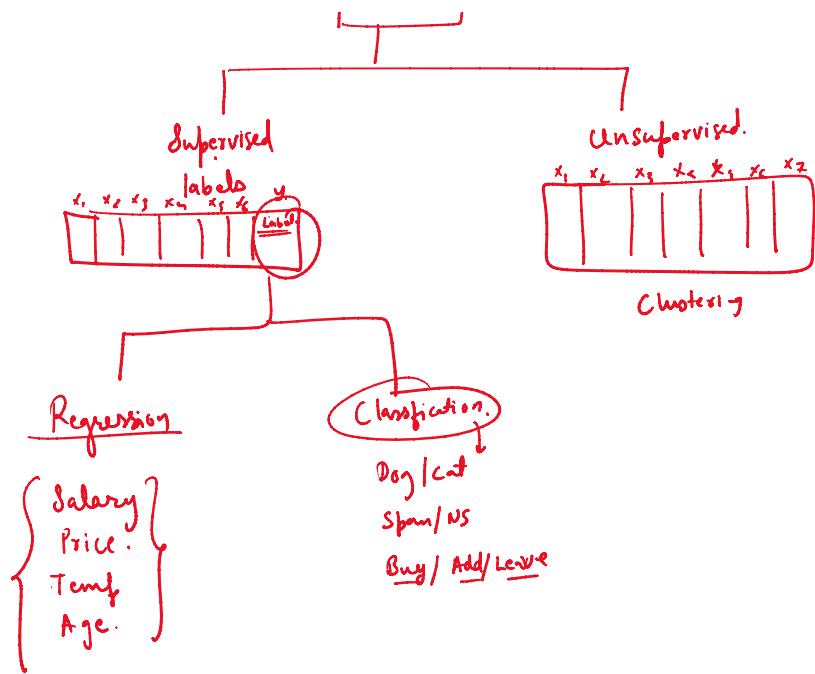
- * Qualitative Interview
- * Experiment / Analysis



Riders → hence



ML



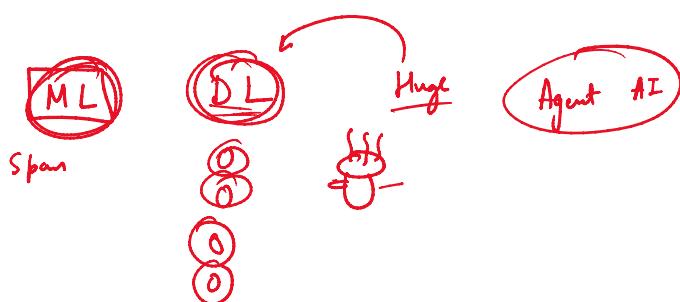
	selling_price	year	km_dri ven	mileag e	engine	max_po wer	age	make	<u>model</u>	Individ ual	<u>Trustmark Dealer</u>	Diesel	Electric	LPG	Petrol	Manu al	5	>5
0	-1.11104 -6	-0.801 317	1.1958 28	0.0457 45	-1.310 754	-1.1577 80	0.8013 17	-0.433 854	-1.125 683	1.2488 92	-0.098382 275	-0.985 095	-0.020 917	-0.056 22	1.0246 18	0.4958 03	0.4445 728	
1	-0.22394 4	0.4500 30	-0.7378 72	-0.140 402	-0.537 456	-0.3602 03	-0.450 030	-0.327 501	-0.333 227	1.2488 92	-0.098382 275	-0.985 095	-0.020 917	-0.056 22	1.0246 18	0.4958 03	0.4445 728	
2	-0.91505 8	-1.426 990	0.0356 08	-0.582 501	-0.537 456	-0.4048 85	1.4269 90	-0.327 854	-0.789 265	1.2488 92	-0.098382 275	-0.985 095	-0.020 917	-0.056 22	1.0246 18	0.4958 03	0.4445 728	
3	-0.89236 5	-0.801 317	-0.4091 43	0.3296 20	-0.921 213	-0.6930 85	0.8013 17	-0.433 854	-0.905 265	1.2488 92	-0.098382 275	-0.985 095	-0.020 917	-0.056 22	1.0246 18	0.4958 03	0.4445 728	
4	-0.18268 3	0.1371 94	-0.5445 02	0.7600 85	0.0429 99	0.01043 5	-0.137 194	-0.246 579	-0.013 096	-0.800 710	-0.098382 10149	1.0149 45	-0.020 095	-0.056 917	-0.975 970	0.4958 18	0.4445 03	-0.424 728

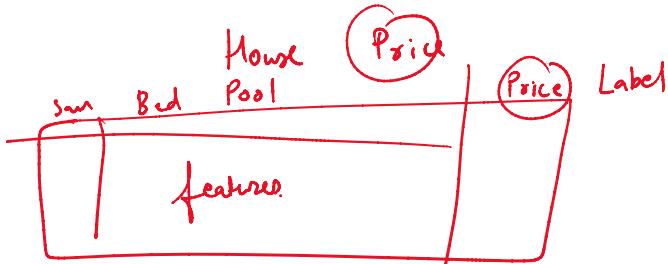
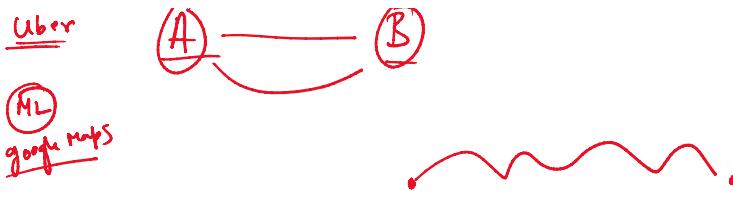
From: <https://www.kaggle.com/datasets/abhishek/used-car-dataset-from-kaggle>

9545126535

① ~~Domain~~
& compound Interest

① Diabetic Retinopathy





Can you please explain Day 9, Q6?
A rare disease affects only 1 out of 1000 people.

Upon conducting a diagnostic test to detect it, it is found that 90% of the affected people get a "positive" test result and that 5% of the non-affected people also get "positive" test result.

Given that a person tested positive, what is the probability that he is actually affected?

From: <https://www.khanacademy.org/test-prep/mcat/medical-principles-and-physiology-linear-regression-1-2/>

