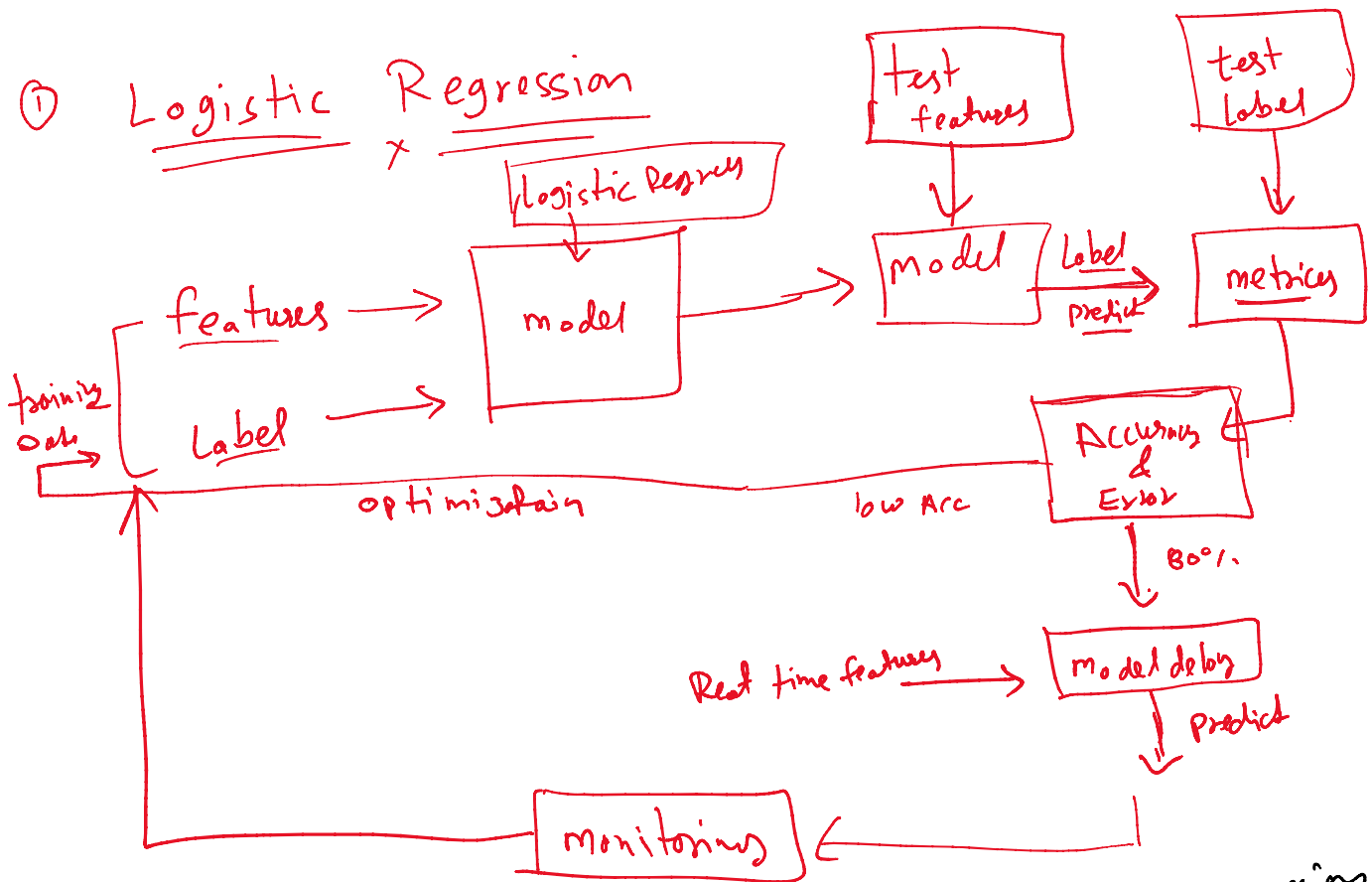


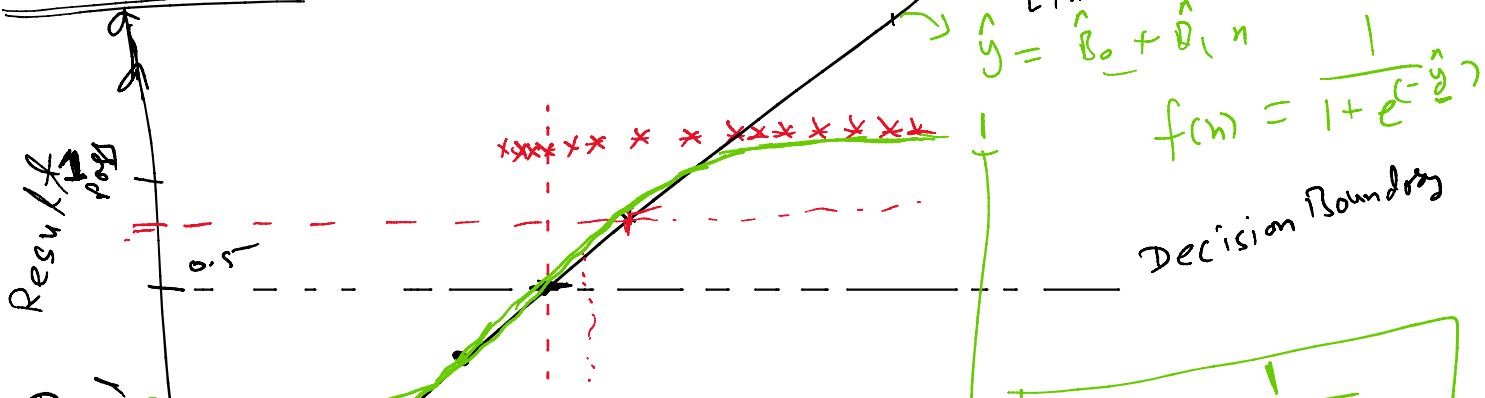


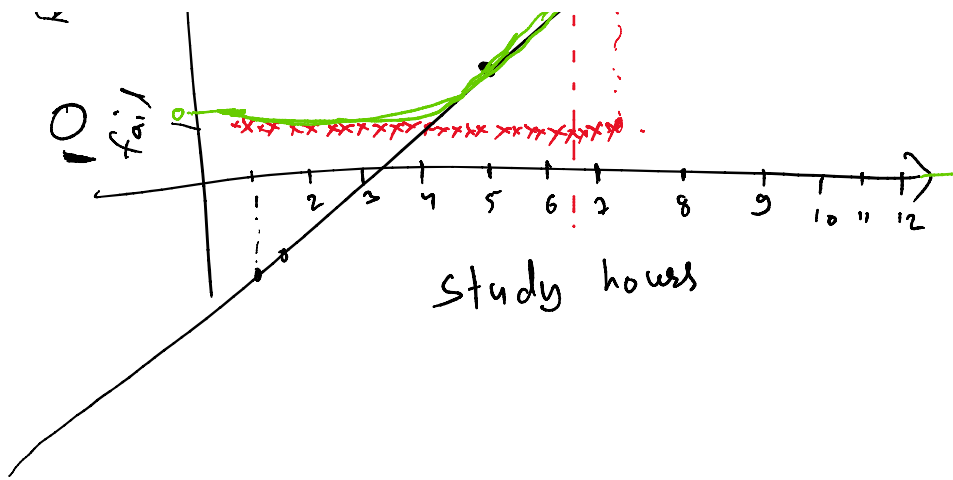
$$h(n) = B_0 + B_1 X_1$$

① Logistic Regression



→ Classification





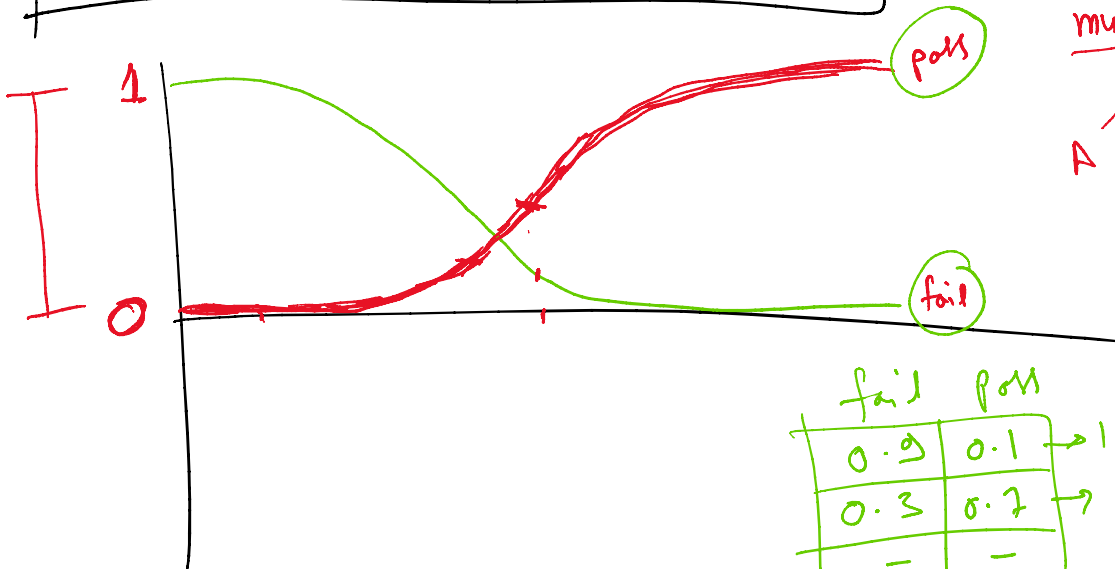
$$\text{logit} = \frac{1}{1 + e^{-\beta_0 - \beta_1 x}}$$

→ logit or Sigmoid function →

$$f(z) = \frac{1}{1 + e^{-z}}$$

Binary
 ↓
 yes No

multinomial
 ↓
 A B C D



fail	pass	
0.9	0.1	→ 1
0.3	0.7	→ 1
-	-	

→ Recommendation Engine

win item Based

(ii) user Based

(ii) matrix factorization

	A	B	C
1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
5	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

→ Item Based

Bahubali 2

Star Wars
Iron Man
Avengers

5x
5x
5x
4x

Avenger
Star Wars
Iron Man
Bahubali

Average
Common to

∞
41

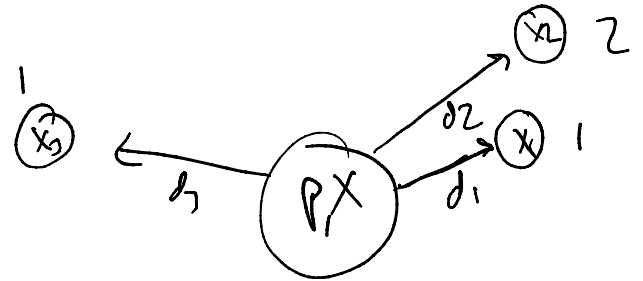
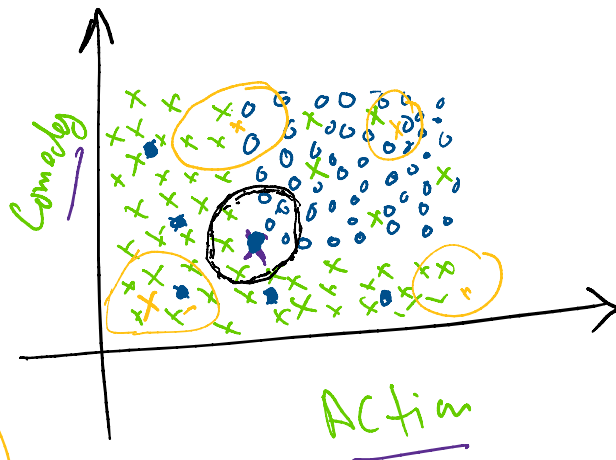
—
—
—

K - Nearest Neighbours
↓ odd
hyper parameter

Sachin Like
Dislike

$K=7$

X → new



$\frac{4}{3} \rightarrow \frac{\text{Dislike}}{\text{Like}} \rightarrow \text{Dislike}$

$K=2$ → Cost → Elbow method

- ① Fraud Detection
- ② Breast Cancer classification

logic - Regression → video

