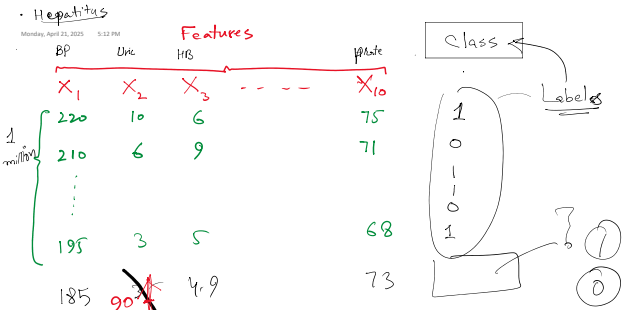
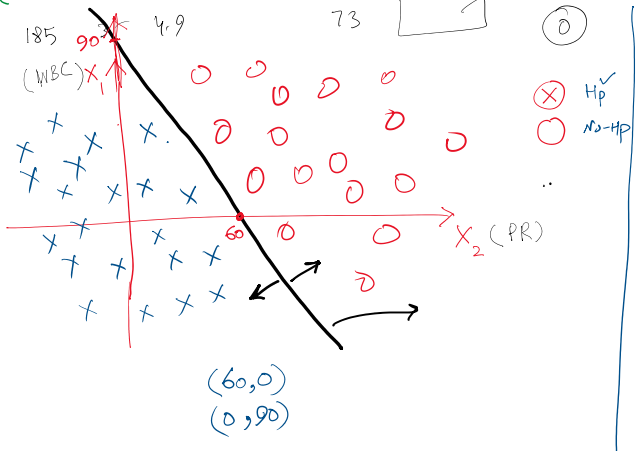
- Hepatitis

Monday, April 21, 2025 5:12 PM





Two-point form

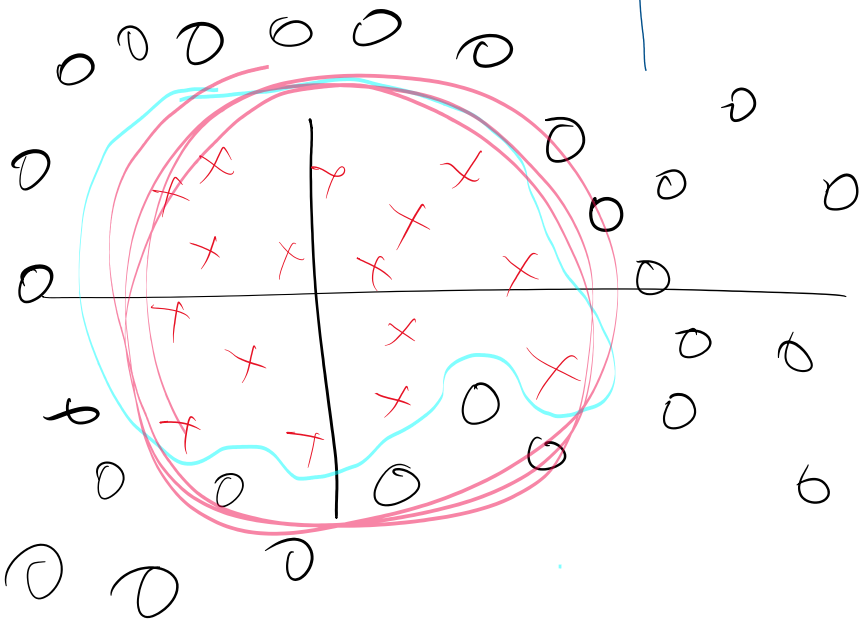
$$X_1 = -4X_2 + 90$$

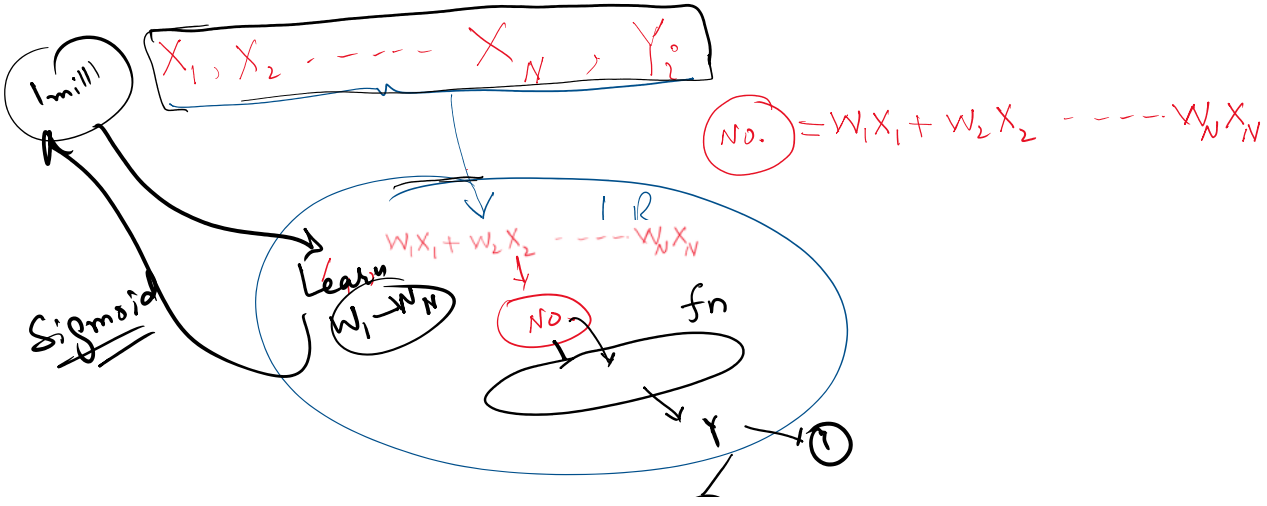
$$X_1 + 4X_2 - 90 = 0$$

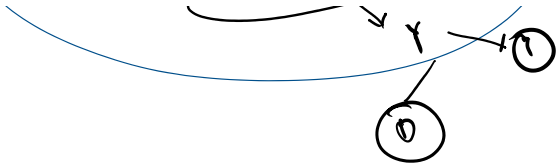
$X_1 - 100$, $X_2 - 75$ (75, 100)

$100 + 4(75) - 90 =$

310 > 0





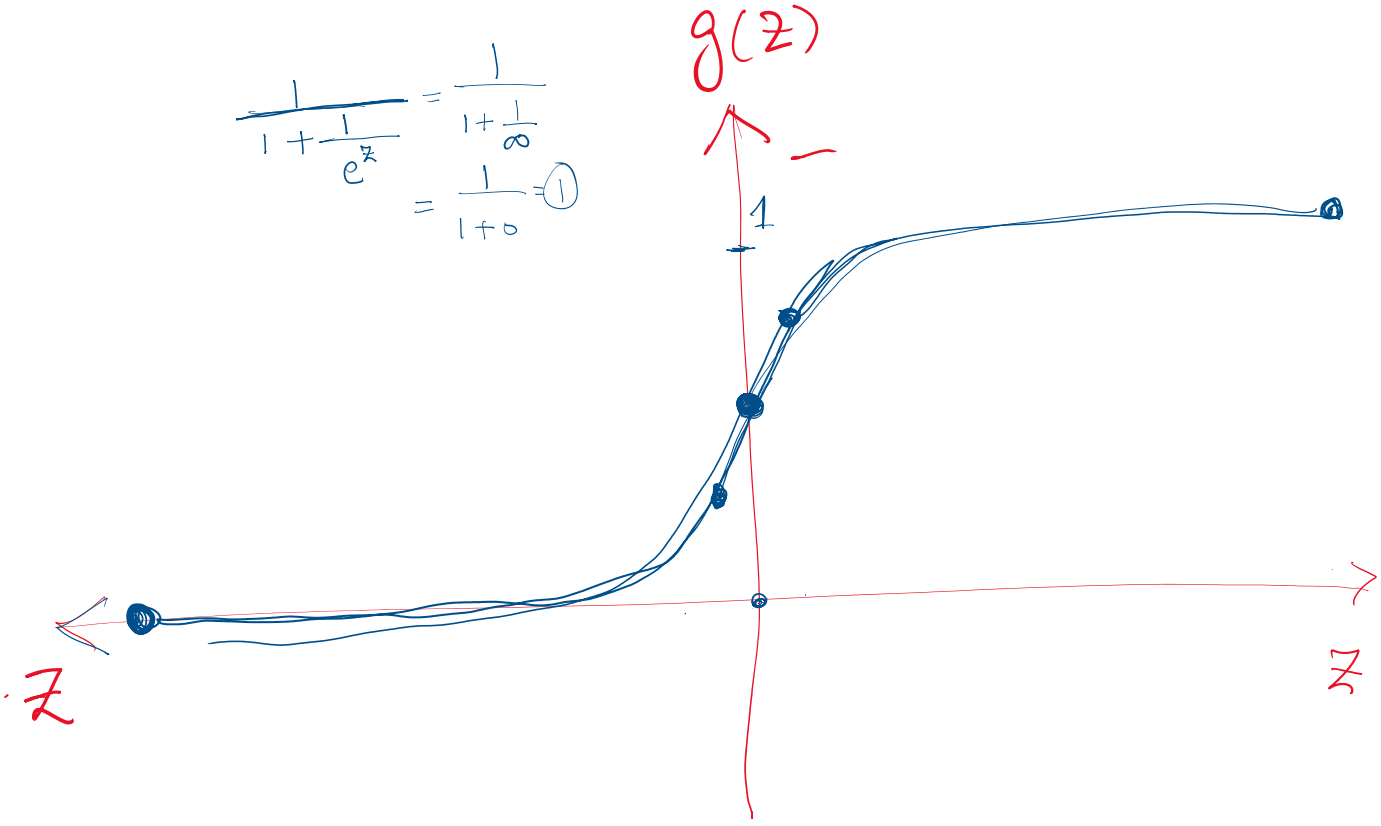


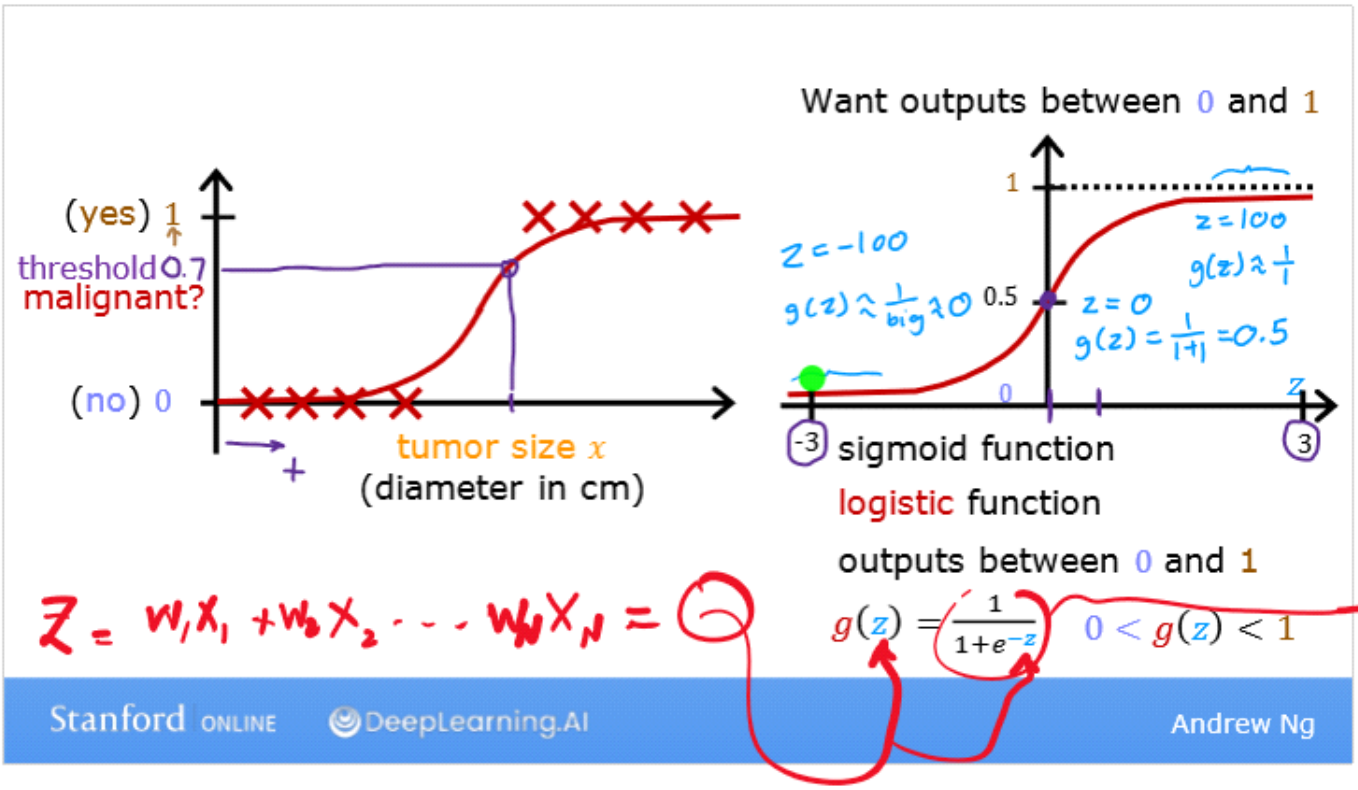
$$g(z) = \frac{1}{1+e^{-z}}$$

z	g(z)
0	0.5
z >>> 0	1
z <<<< 0	0
1	0.73
-1	0.26

g = Variable = z

$$\frac{1}{1+\frac{1}{e^{z}}} = \frac{1}{1+\frac{1}{\infty}} = \frac{1}{1+0} = 1$$




Want outputs between 0 and 1
(yes) 1
threshold 0.7
malignant?
(no) 0
tumor size x
(diameter in cm)
1
0.5
0
z
-3
3
z = -100
$g(z) \approx \frac{1}{big} \approx 0$
z = 0
$g(z) = \frac{1}{1+1} = 0.5$
z = 100
$g(z) \approx \frac{1}{1}$
sigmoid function
logistic function
outputs between 0 and 1
$z = w_1 x_1 + w_2 x_2 \cdots w_n x_n =$
$g(z) = \frac{1}{1+e^{-z}}$
$0 < g(z) < 1$
Stanford ONLINE
DeepLearning.AI
Andrew Ng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