Thứ
Ngày . . No.

Question 9

normalization: $x_{norm} = \frac{x - x_{min}}{x_{max} - x_{min}}$

ID	x_1	x_2	x_{1norm}	x_{2norm}	z	$\hat{y}$
1	35	720	0,2917	0,8667	0,4542	0
2	28	650	0	0,2778	0,2111	0
3	45	750	0,7083	0,8333	0,6458	1
4	31	600	0,125	0	0,1375	0
5	52	780	1	1	0,8	1
6	29	630	0,0417	0,1667	0,1792	0
7	42	710	0,5833	0,6111	0,5194	1
8	33	640	0,2083	0,2222	0,2514	0

activation function:

$z = w_1 x_1 + w_2 x_2 + b$

$$y = \begin{cases} 1 & \text{if } z \geq 0,5 \\ 0 & \text{if } z < 0,5 \end{cases}$$

Normalization is needed because it balances the contributions of features with different scales, ensure numerical stability and help the model converge faster during training by making the lost function.