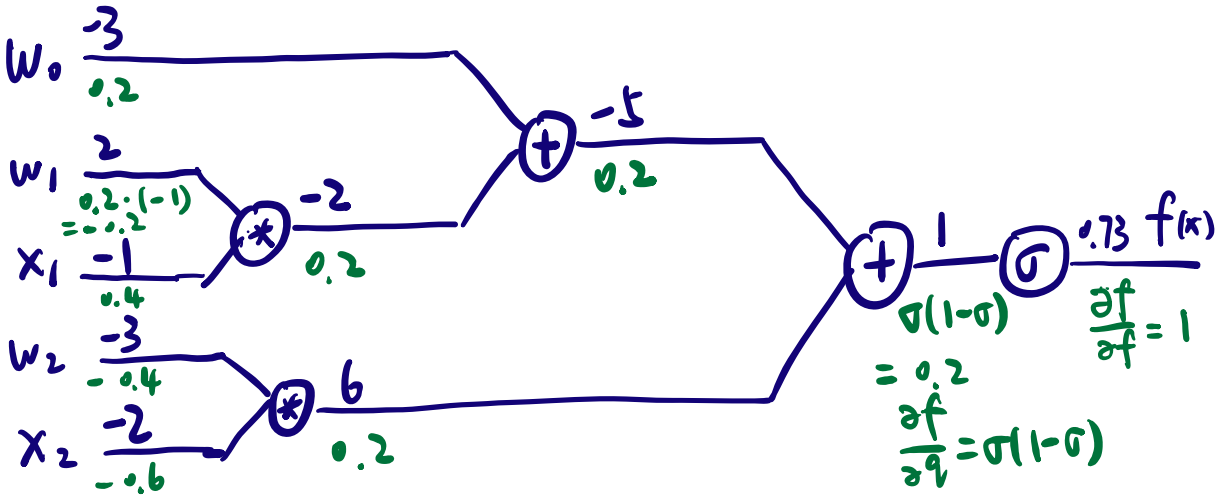
Oct 5, 2022 Wed

$$f(x) = \sigma(q) = \frac{1}{1+\exp(-w^T x)}$$

$$q = w^T x$$

$$= w_0 + w_1 x_1 + w_2 x_2$$



$$\frac{\partial(a+b)}{\partial a} = 1 \qquad \frac{\partial(a \cdot b)}{\partial a} = b$$

$$w_k = w_{k-1} + \eta \frac{\partial f}{\partial w_{k-1}}$$

$$\frac{\partial f}{\partial w_{k-1}} = \begin{bmatrix} 0.2 \\ -0.2 \\ -0.4 \end{bmatrix} \qquad w_{k-1} = \begin{bmatrix} -3 \\ 2 \\ -3 \end{bmatrix}$$