
 $C = 1, 2, 3$


one hot
encoding

 $1 \rightarrow 1, 0, 0$
 $2 \rightarrow 0, 1, 0$
 $3 \rightarrow 0, 0, 1$

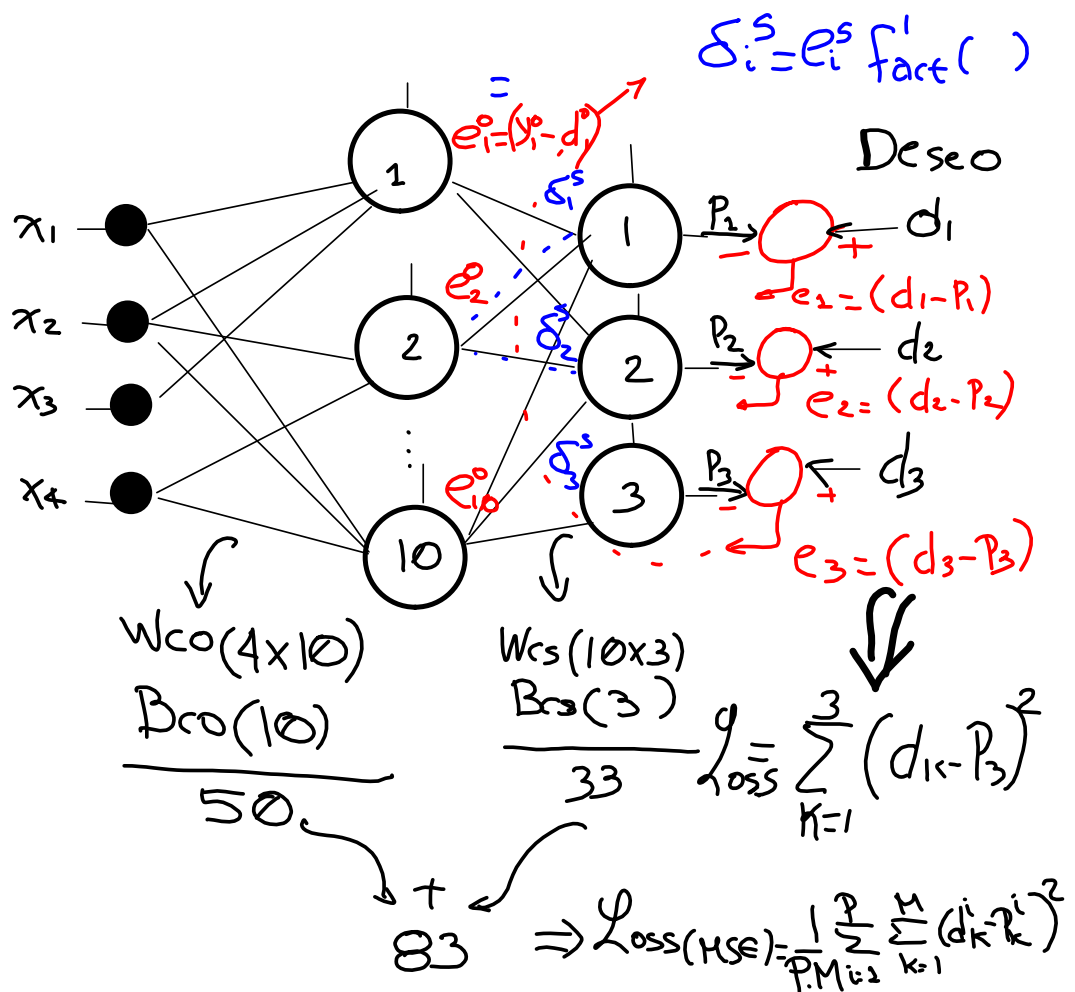
$$\text{Softmax} = \frac{e^{\text{Net}d_1}}{e^{\text{Net}d_1} + e^{\text{Net}d_2} + \dots + e^{\text{Net}d_n}}$$

$$= \frac{e^{\text{Net}d_i}}{\sum_{k=1}^M e^{\text{Net}d_k}} \quad \sum_{k=1}^M P_i = 1$$

$$y_{c1} = \frac{e^{\text{Net}d_1}}{\sum_{k=1}^3 e^{\text{Net}d_k}} P_{c1} \quad P_{c1} + P_{c2} + P_{c3} = 1$$

$$y_{c2} = \frac{e^{\text{Net}d_2}}{\sum_{k=1}^3 e^{\text{Net}d_k}} P_{c2}$$

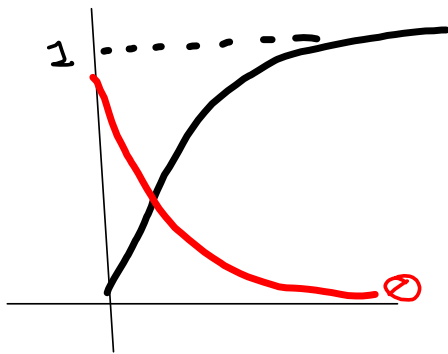
100% (150) $\left\{ \begin{array}{l} 70\% \text{ Train} \\ (105) \\ 30\% \text{ Testeo} \\ (45) \end{array} \right.$



$$e_2^o = \delta_1^o w_{21}^s + \delta_2^o w_{22}^s + \delta_3^o w_{23}^s$$

$$e_2^o = \sum_{k=1}^3 \delta_k^o w_{2k}^s \quad (\text{Back Propagation})$$

$$\text{Precisión} = \frac{\text{No aciertos}}{\text{No Total de Pruebas}}$$



Real	0	16	0	0 = 16
	1	0	17	1 = 18
	2	0	0	11 = 11
		0	1	2
		Predicción		

$$\text{Precision} = \frac{44}{45}$$