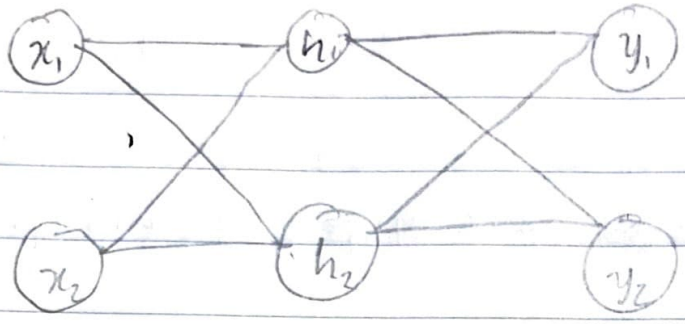
Toy Example



$$\text{cat} = \begin{bmatrix}1\\0\end{bmatrix} \quad \text{dog} = \begin{bmatrix}0\\1\end{bmatrix} \quad \begin{bmatrix}1\\0\end{bmatrix}$$

$$W_1^1 = \begin{bmatrix}3 & 6\\ 4 & 5\end{bmatrix} \qquad w_0^1 = \begin{bmatrix}1\\-6\end{bmatrix}$$

$$W_1^2 = \begin{bmatrix}2 & 3\\ 4 & 3\end{bmatrix} \qquad w_0^2 = \begin{bmatrix}-1\\-2\end{bmatrix}$$

$$h_1 = \sigma_{Sig}\left(W^{1T}x + w_0^1\right)$$

$$h_2 = \sigma_{Softmax}\left(W^{2T}h + w_0^2\right)$$