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Part 2 continued

net_{C1}

$$\begin{aligned} f(\text{net}_{C1}) &= \frac{1}{1 + 2.71828^{-0.3774}} \\ &= \frac{1}{1.68529420} \\ &= 0.5934 \\ &59\% \end{aligned}$$

net_{C2}

$$\begin{aligned} f(\text{net}_{C2}) &= \frac{1}{1 + 2.71828^{-1.0217}} \\ &= \frac{1}{1.359982697} \\ &= 0.7353 \\ &73\% \end{aligned}$$

Stage 2: Calculating the total Error

To calculate the total error of the model, we need to compare the actual output to the target outputs (0 and 1). In this step, we used the Squared error function

$$SE = \frac{1}{2} \sum_{i=1}^n (+i - z_i)^2$$

local error C₁

$$SE_{C1} = (0 - 0.5934)^2 = 0.5934^2 = 0.3521$$

local error C₂

$$SE_{C2} = (1 - 0.7353)^2 = 0.2647^2 = 0.070$$

We sum the local errors for the total error

$$SE = 0.3521 + 0.070 = 0.4221$$

Plug in the value to the cost function formula

$$SE = \frac{1}{2} \cdot 0.4221 = 0.21105 \text{ (total error)}$$