

Date: \_\_\_\_\_

21L-0260

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AI Homework

$$\begin{aligned}a_4 &= 0.2 + 0 + (-0.5) + (-0.4) \\&= 0.2 - 0.5 - 0.4 \\&= -0.7\end{aligned}$$

Sigmoid-

$$\Rightarrow 0.33$$

$$\begin{aligned}a_5 &= -0.3 + 0 + 0.2 + 0.2 \\&= 0.1\end{aligned}$$

Sigmoid

$$\Rightarrow 0.52$$

$$\begin{aligned}y &= (0.33)(-0.3) + 0.52(-0.2) + 0.1 \\&= -0.099 + (-0.104) + 0.1 \\&= -0.103\end{aligned}$$

Sigmoid

$$\Rightarrow 0.47$$

$$\begin{aligned}SE_{w_{46}} &= -(0.47) \times 0.47 \times (1-0.47) \times 0.33 \\&\Rightarrow 0.039\end{aligned}$$

$$\begin{aligned}w_{46} \text{ new} &\Rightarrow -0.3 - (0.1 \times 0.039) \\&\Rightarrow -0.3039\end{aligned}$$

$$\begin{aligned}SE_{w_{56}} &= -(0.47) \times 0.47 \times (1-0.47) \times 0.54 \Rightarrow 0.061\end{aligned}$$

$$\begin{aligned}w_{56} \text{ new} &\Rightarrow -0.2 - (0.1 \times 0.061) \\&\Rightarrow -0.2061\end{aligned}$$