



$$\frac{\partial J}{\partial \theta^{(3)}} = \frac{\partial J}{\partial z^{(4)}} \times \frac{\partial z^{(4)}}{\partial \theta^{(3)}}$$

$$= (a^{(4)} - y) \times a^{(3)}$$

$$= \delta^{(4)} \times a^{(3)}$$

$$\frac{\partial J}{\partial \theta^{(2)}} = \frac{\partial J}{\partial z^{(4)}} \cdot \frac{\partial z^{(4)}}{\partial a^{(3)}} \cdot \frac{\partial a^{(3)}}{\partial z^{(3)}} \cdot \frac{\partial z^{(3)}}{\partial \theta^{(2)}}$$

$$= (a^{(4)} - y) \cdot \theta^{(3)} \cdot a^{(3)} \cdot (1 - a^{(3)}) \cdot a^{(2)}$$



$$\delta^{(3)}$$



$$\frac{25}{2 \theta^{(1)}} = \frac{99}{-}$$

your turn