
$$\begin{aligned}
\mathbf{w}_4^{(3)} &= \mathbf{w}_3^{(3)} - \eta \vec{x}_n^{(2)} (\vec{\delta}^{(3)})^T = \mathbf{w}_3^{(3)} - \eta \begin{pmatrix} 1 \\ x_1^{(2)} \\ x_2^{(2)} \\ x_3^{(2)} \end{pmatrix} \delta_1^{(3)} \\
&= \begin{pmatrix} 0.66 \\ -1.90 \\ -1.90 \\ -1.90 \end{pmatrix} - 0.01 \begin{pmatrix} -1.46 \\ 0.42 * (-1.46) \\ 0.42 * (-1.46) \\ 0.42 * (-1.46) \end{pmatrix} = \begin{pmatrix} 0.67 \\ -1.89 \\ -1.89 \\ -1.89 \end{pmatrix}
\end{aligned}$$