

Kotitehtavat_2.pdf

Teht 1

$$A_0 = [3 \ 2 \ 5], \quad W_1 = [1.1 \quad -1.3 \quad 1.5 \ 0.1 \quad 2.0 \quad 1.7], \quad W_2 = [2.0, -1.2]$$

$$A_1 = W_1 A_0$$

$$A_1 = [1.1 \quad -1.3 \quad 1.5 \ 0.1 \quad 2.0 \quad 1.7] [3 \ 2 \ 5]$$

$$A_1 = [1.1 * 3 - 1.3 * 2 + 1.5 * 5 \ 0.1 * 3 + 2.0 * 2 + 1.7 * 5 \quad]$$

$$A_1 = [8.2 \ 12.8]$$

$$A_2 = W_2 A_1$$

$$A_2 = [2.0, -1.2] [8.2 \ 12.8]$$

$$A_2 = [2.0 * 8.2 - 1.2 * 12.8 \quad]$$

$$A_2 = [1.04]$$

Teht 2

$$g(x) = \frac{1}{1+e^{-x}}$$

$$A_1 = g(W_1 A_0)$$

$$A_1 = g([1.1 \quad -1.3 \quad 1.5 \ 0.1 \quad 2.0 \quad 1.7] [3 \ 2 \ 5])$$

$$A_1 = g([1.1 * 3 - 1.3 * 2 + 1.5 * 5 \ 0.1 * 3 + 2.0 * 2 + 1.7 * 5 \quad])$$

$$A_1 = [0.99972542 \ 0.99999724]$$

$$A_2 = g(W_2 A_1)$$

$$A_2 = g([2.0, -1.2] [0.99972542 \ 0.99999724])$$

$$A_2 = g([2.0 * 0.99972542 - 1.2 * 0.99999724 \quad])$$

$$A_2 = [0.68985771]$$