

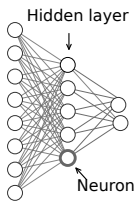
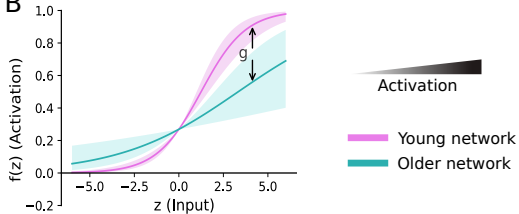
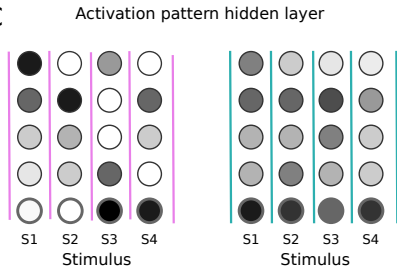
A

Diagram illustrating the input and activation process for a neuron. The input vector $x = [x_1, x_2, \dots, x_n]$ is weighted by $w = [w_1, w_2, \dots, w_n]$ and summed (Σ) to produce the net input z . The activation function $f(z)$ is applied to z to produce the output.

$$z = \sum_{i=1}^n w_i x_i + b$$

$$f(z) = \frac{1}{1 + e^{-gz}}$$

B**C****D**