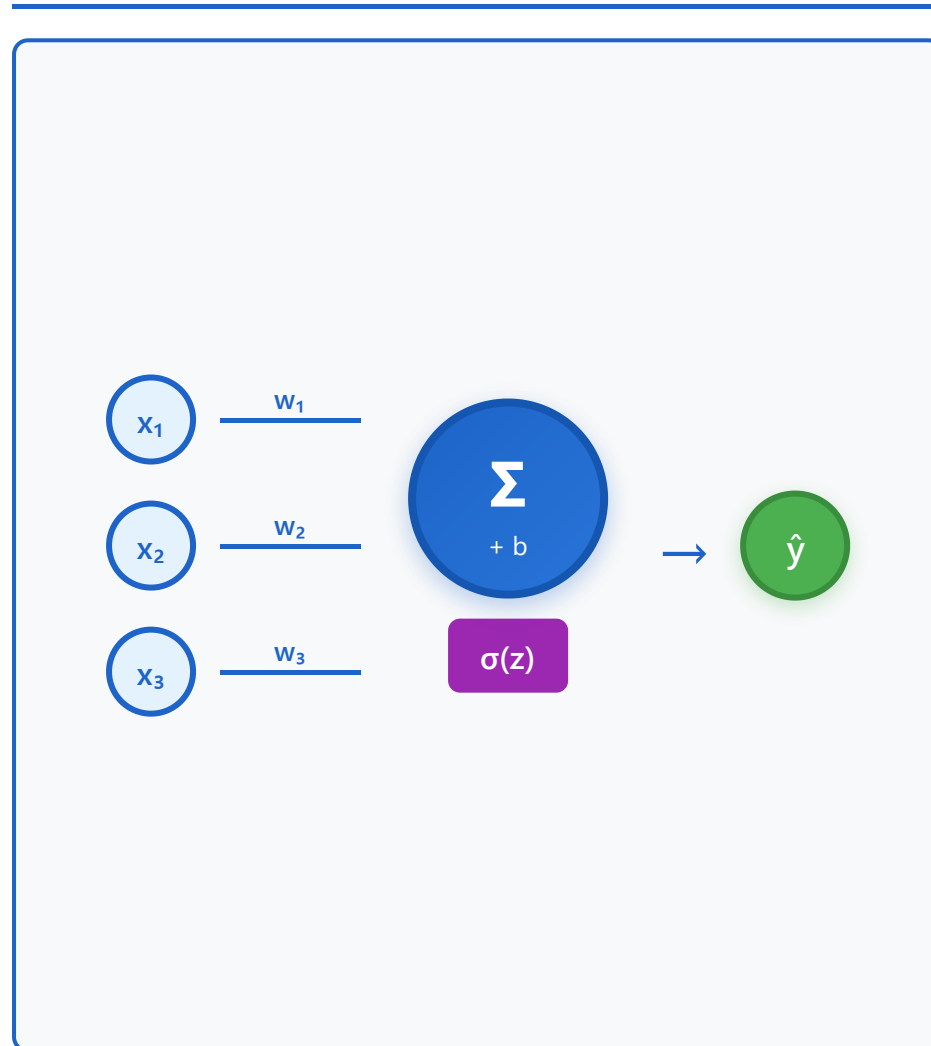


Single-layer Perceptron Review

Architecture



Mathematical Form

Linear Combination

$$z = \sum w_i x_i + b$$

Activation

$$\hat{y} = \sigma(z)$$

Key Components

- **Weights (w):** Feature importance
- **Bias (b):** Decision threshold
- **Activation (σ):** Non-linearity

⚠ Limitation

Only learns linear decision boundaries - cannot solve XOR problem