

Perceptron Algorithm

Simplest Linear Classifier

Frank Rosenblatt

1957

Update Rule:

$$\mathbf{w} \leftarrow \mathbf{w} + \eta(y - \hat{y})\mathbf{x}$$

Activation Function:

Step Function

(0 or 1)



Iteratively adjusts weights for misclassified points



Converges if data is linearly separable



Limitation: No convergence for non-separable data



Historical Significance: Foundation of neural networks