PadhAI: 6 Jars of Sigmoid Neuron

One Fourth Labs

Summary

Let's compare MP Neuron, Perceptron and Sigmoid Neuron

	Data	Task	Model	Loss	Learning	Evaluation
MP Neuron	{0,1}	Binary Classification	$g(x) = \sum_{i=1}^{n} x_i$ y = 1 if g(x) >= b y = 0 otherwise	Loss = $\sum_i (y_i != \hat{y}_i)$	Brute Force Search	Accuracy
Perceptron	Real Inputs	Binary Classification	y = 1 if $\sum_{i=1}^{n} w_i x_i >= b$ y = 0 otherwise	Loss = $\sum_i (y_i - \hat{y}_i)^2$	Perceptron Learning Algorithm	Accuracy
Sigmoid	Real Inputs	Classification/ Regression	$y = \frac{1}{1 + e^{-(w^T x + b)}}$	Loss = $\sum_i (y_i - \hat{y}_i)^2$	Gradient Descent	Accuracy/RMSE