PadhAI: MP Neuron & Perceptron

One Fourth Labs

MP Neuron Data and Task

What kind of data and tasks can MP neuron process

1. Consider the example of detecting whether the cricketer is out by LBW
2.

Pitch in line(x_1)	Impact(x_2)	Missing Stumps(x_3)	Is it LBW(y)
1	0	0	0
0	1	1	0
1	1	1	1
0	1	0	0

3. We are interested in finding out the relationship between y and x_i
4. Here we use $y = (\sum_{i=1}^{3} x_i >= b)$
   a. y = 1 if g(x) >= b
   b. y = 0 if g(x) < b
5. In case our data has non-boolean inputs, we can convert them to a boolean form
6. For example, consider the following boolean-ised phone spec data
7.

	phone 1	phone 2	phone 3	phone 4	phone 5	phone 6	phone 7	phone 8	phone 9	phone 10
Launch (within 6 months) x_1	0	1	1	0	0	1	0	1	1	0
Weight (<160g) x_2	1	0	1	0	0	0	1	0	0	1
Screen Size (< 5.9in) x_3	1	0	1	0	1	0	1	0	1	0
Dual sim x_4	1	1	0	0	0	1	0	1	0	0
Internal mem(>= 64gb, 4gb ram) x_5	1	1	1	1	1	1	1	1	1	0
NFC x_6	0	1	1	0	1	0	1	1	1	0
Radio x_7	1	0	0	1	1	1	0	0	0	0
Battery (>= 3500mAh) x_8	0	0	0	1	0	1	0	1	0	0
Price? (> 20k) x_9	0	1	1	0	0	0	1	1	1	0
Liked (y)	1	0	1	0	1	1	0	1	0	0