## **Sigmoid Data and Tasks**

What kind of data and tasks can Sigmoid Neuron process

1. Here, the Sigmoid neuron can process data similar to the Perceptron, the difference being the output is real valued, from 0 to 1.
2. This allows us to perform regression: Where we predict y as a continuous value, being some function applied to x,
3. ŷ = f(x), where f() is the sigmoid function in this case
4. Here is a sample, similar to perceptron except for real values output y.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | phone1 | phone2 | phone3 | phone4 | phone5 | phone6 | phone7 | phone8 | phone9 |
| Launch (within 6 months) x1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 |
| Weight (g) x2 | 151 | 180 | 160 | 205 | 162 | 182 | 138 | 185 | 170 |
| Screen Size (< 5.9in) x3 | 5.8 | 6.18 | 5.84 | 6.2 | 5.9 | 6.26 | 4.7 | 6.41 | 5.5 |
| Dual sim x4 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| Internal mem(>= 64gb, 4gb ram) x5 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| NFC x6 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 |
| Radio x7 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 |
| Battery (mAh) x8 | 3060 | 3500 | 3060 | 5000 | 3000 | 4000 | 1960 | 3700 | 3260 |
| Price? (k) x9 | 15k | 32k | 25k | 18k | 14k | 12k | 35k | 42k | 44k |
| Liked (y) | 0.6 | 0.31 | 0.55 | 0.23 | 0.8 | 0.75 | 0.16 | 0.59 | 0.40 |