The Activation Function

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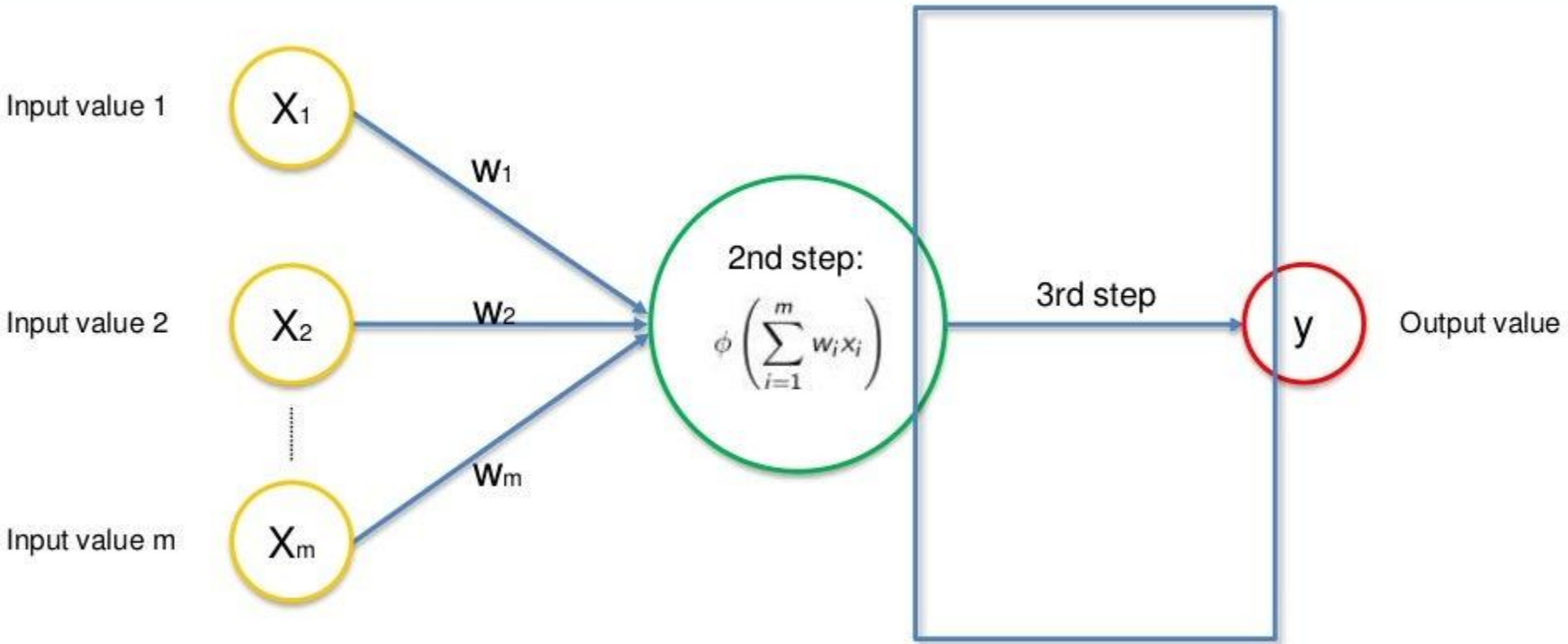
The Activation Function



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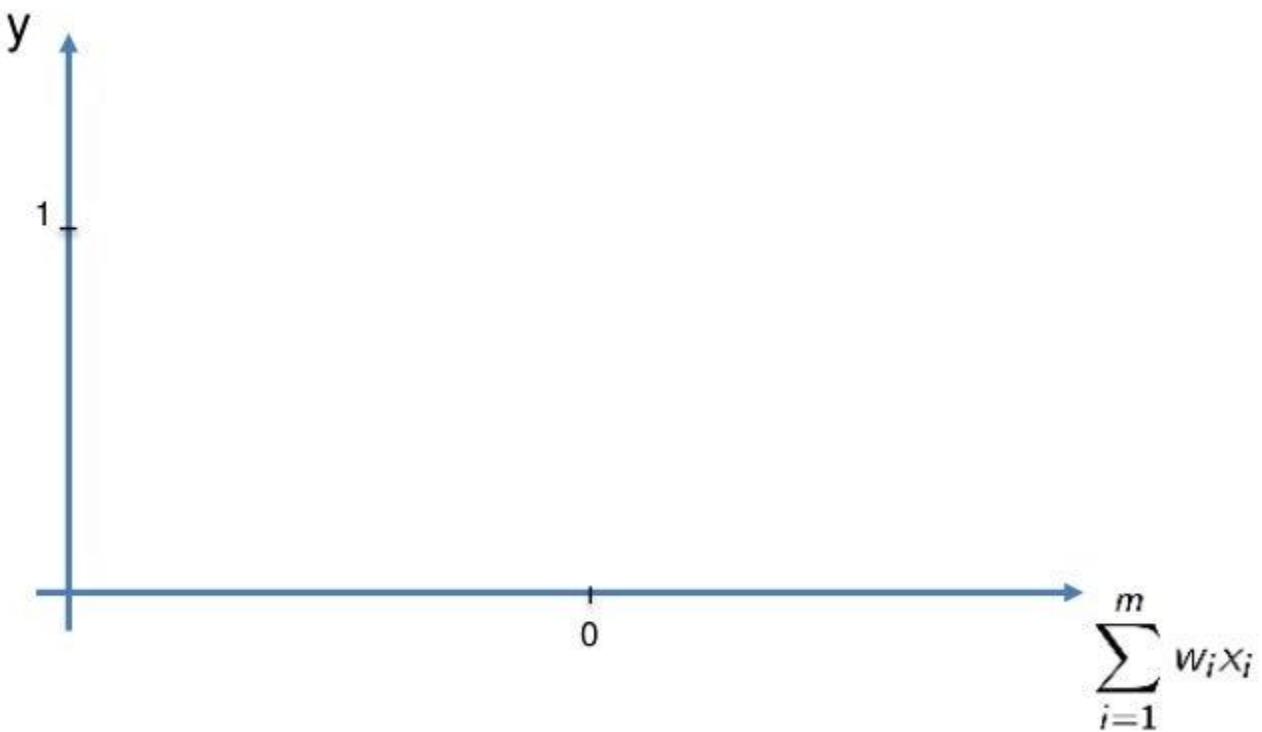

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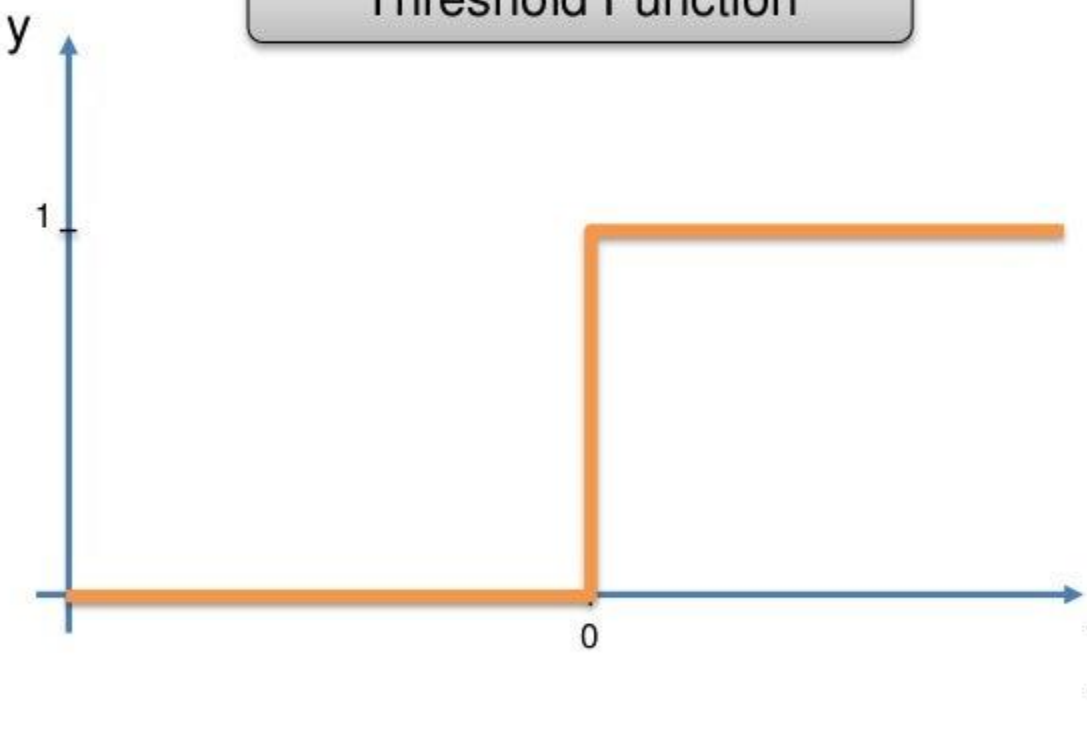
Threshold Function



$$\phi(x) = \begin{cases} 1 \text{ if } x \geq 0 \\ 0 \text{ if } x < 0 \end{cases}$$

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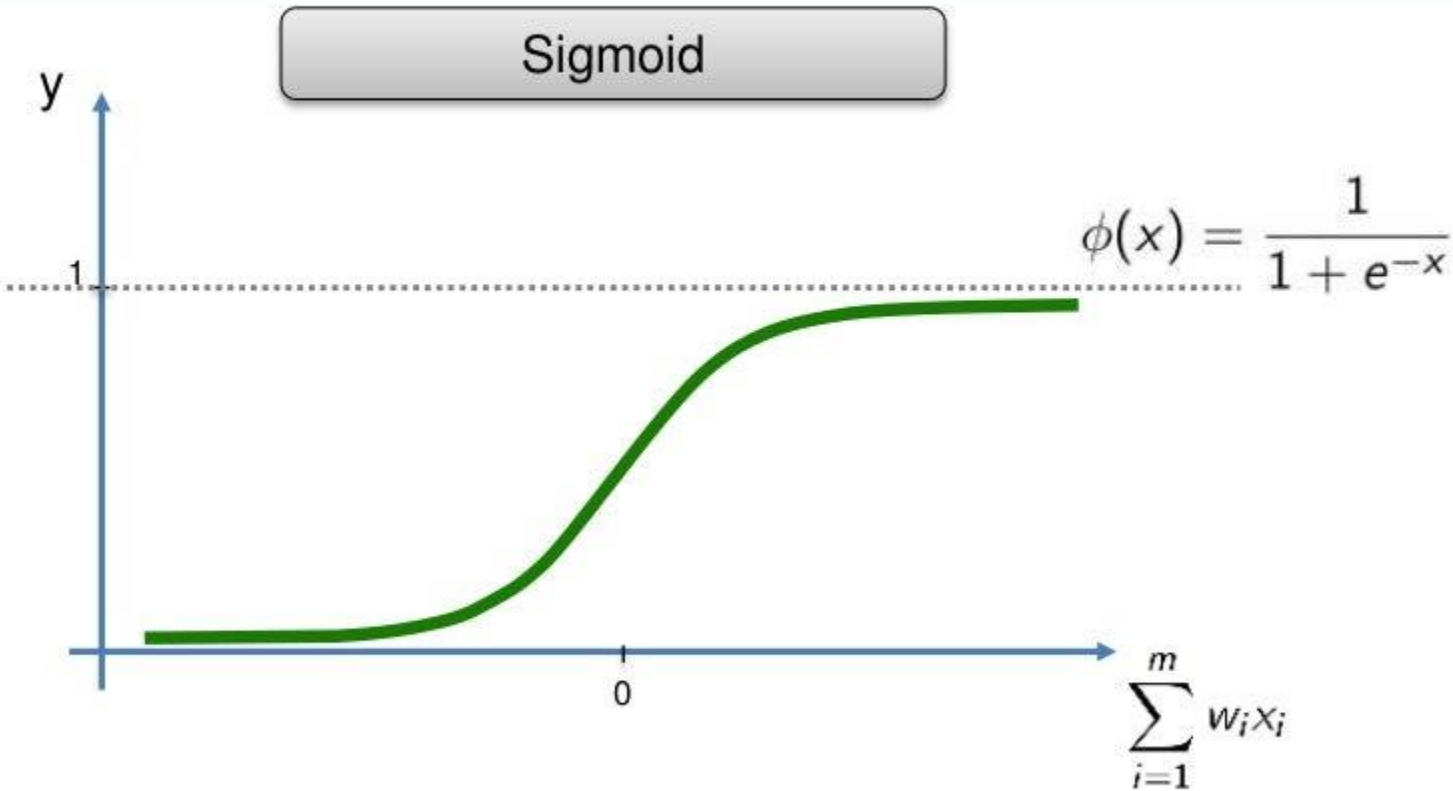

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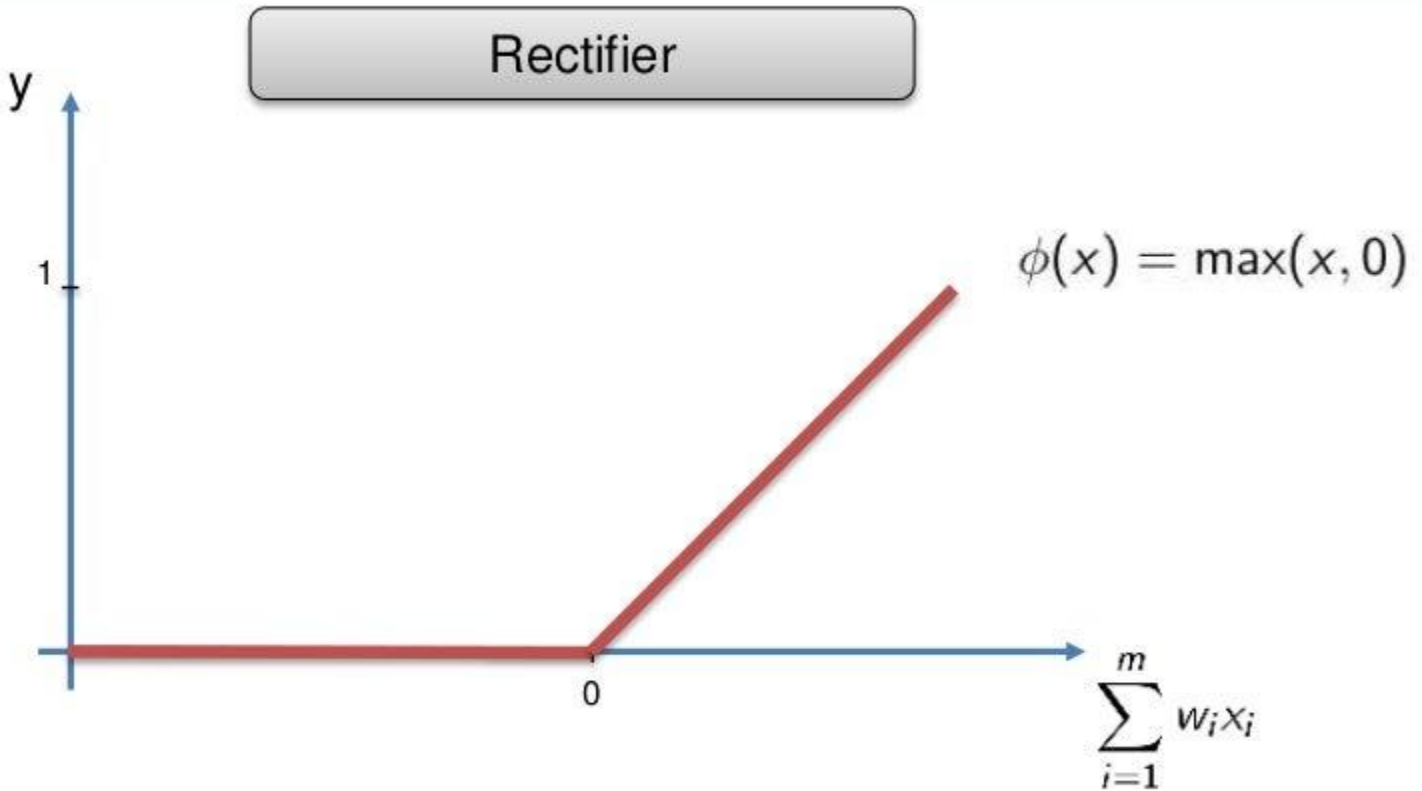

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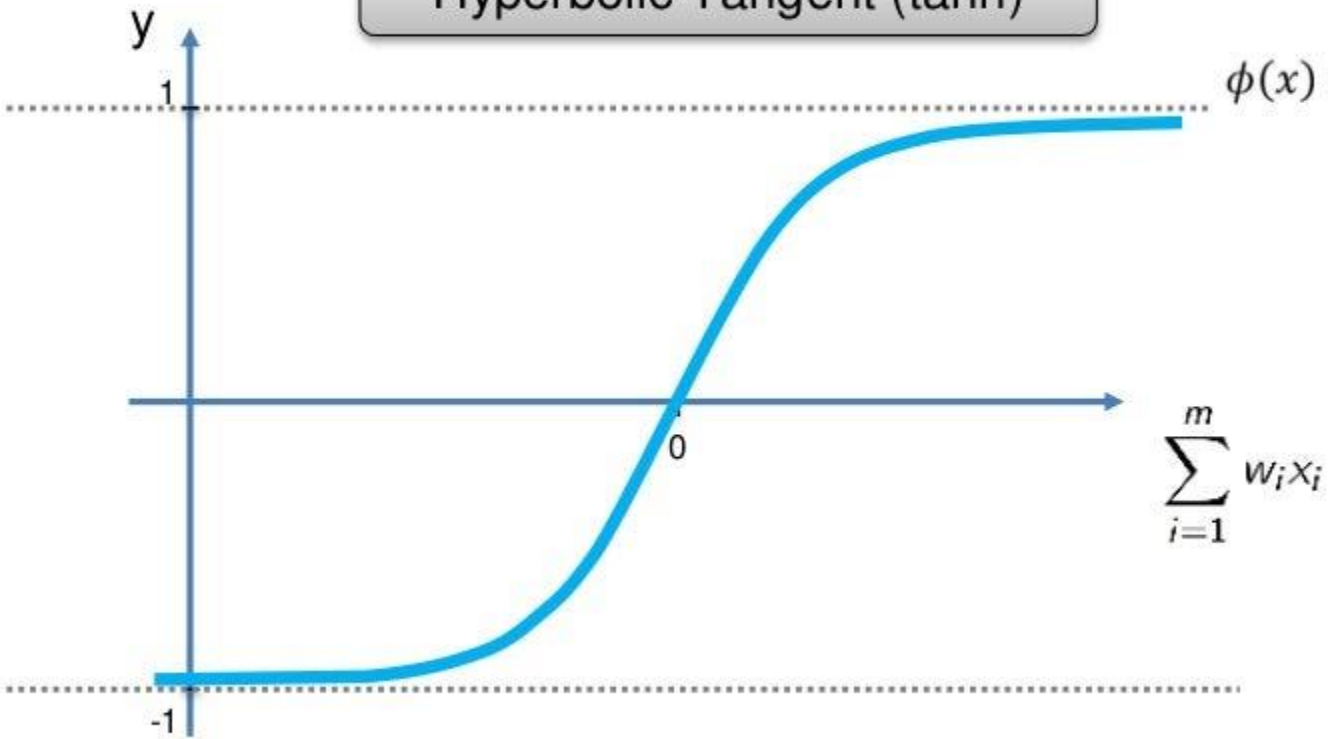
Hyperbolic Tangent (tanh)



$$\phi(x) = \frac{1 - e^{-2x}}{1 + e^{-2x}}$$

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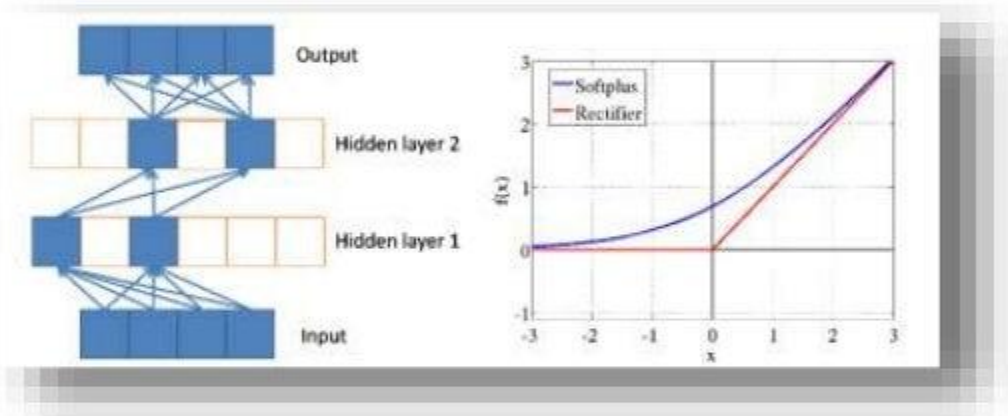
Additional Reading:

Deep sparse rectifier neural networks

By Xavier Glorot et al. (2011)



Link:

http://jmlr.org/proceedings/papers/v15/glorot11a/glorot11a.pdf

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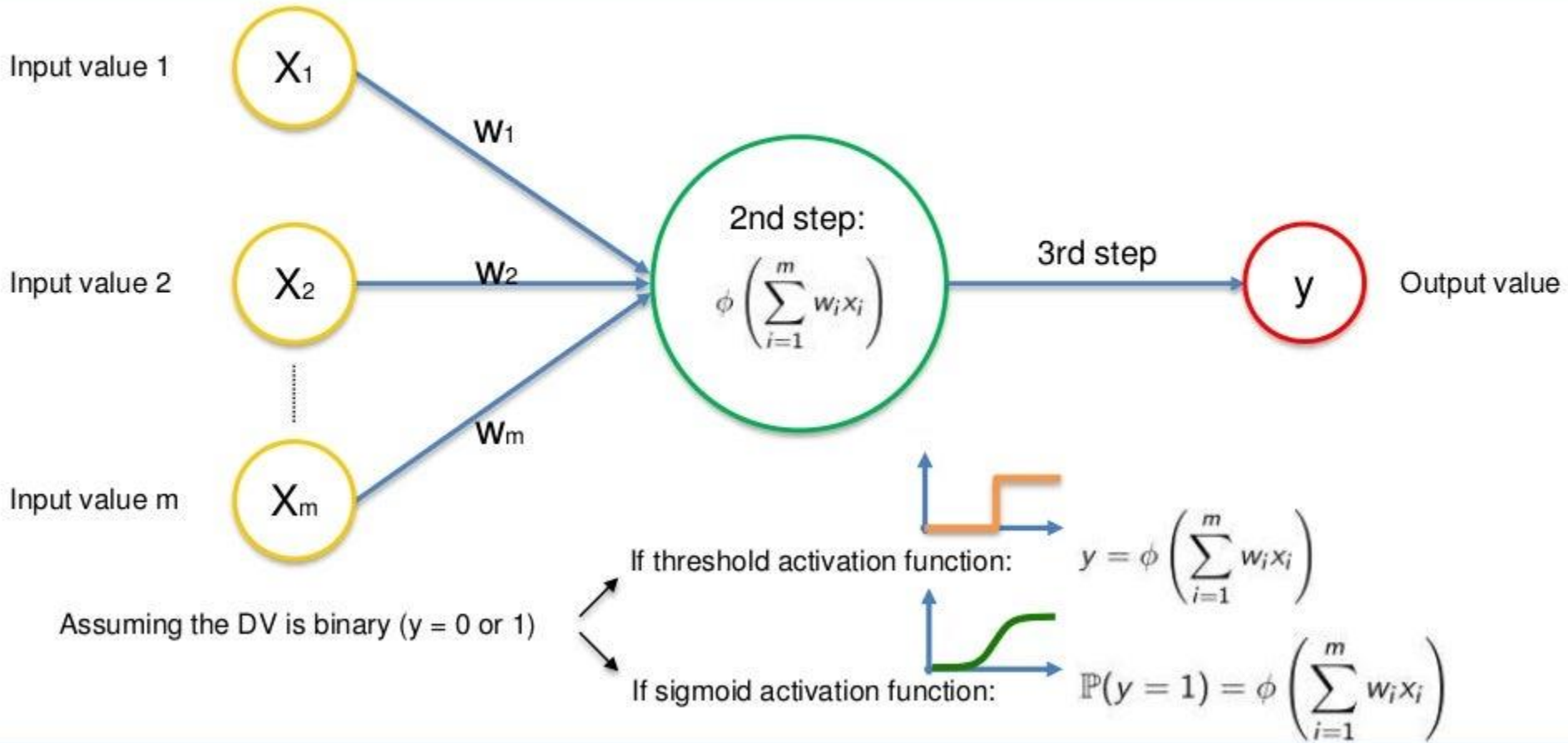

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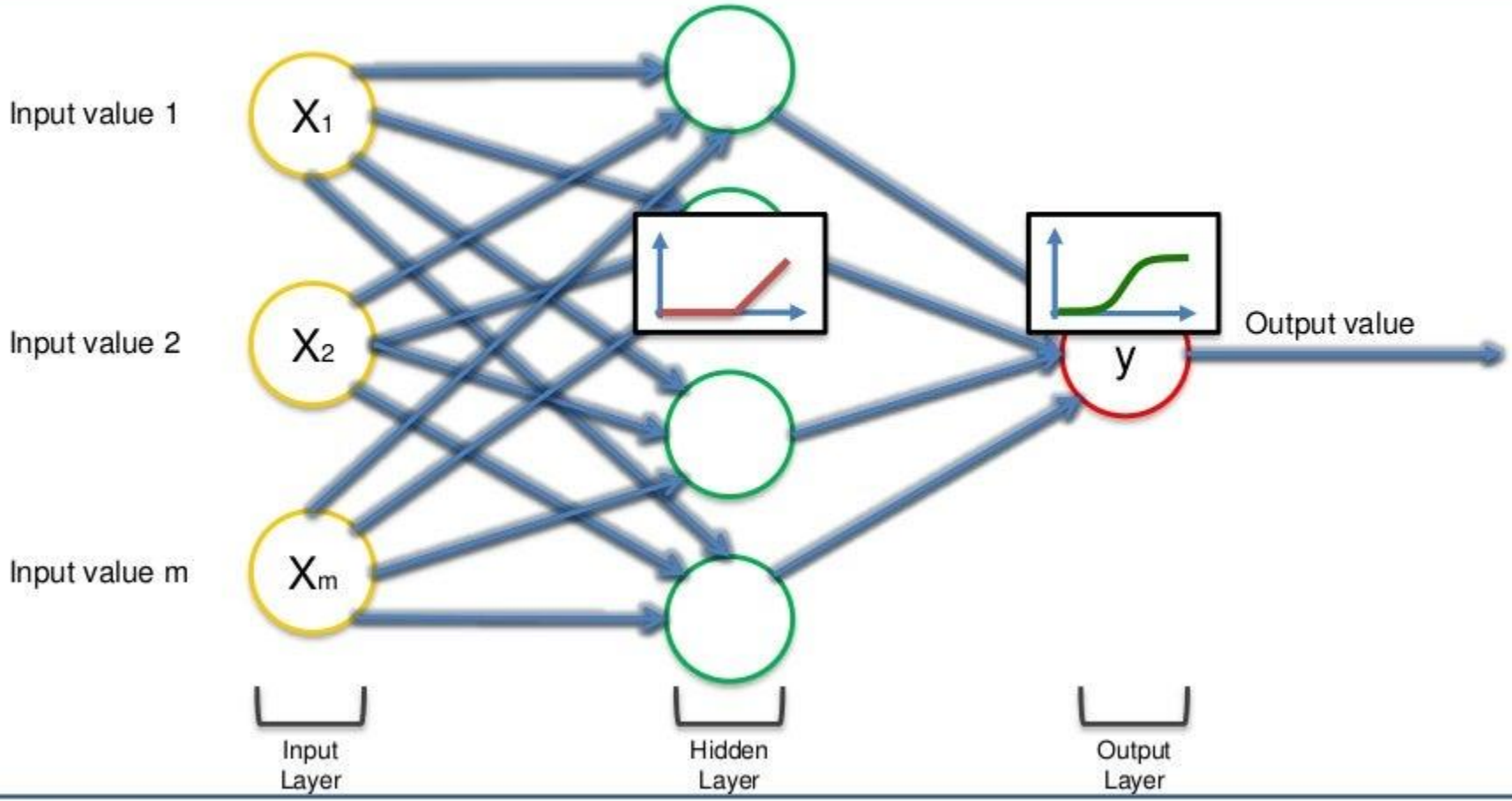

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