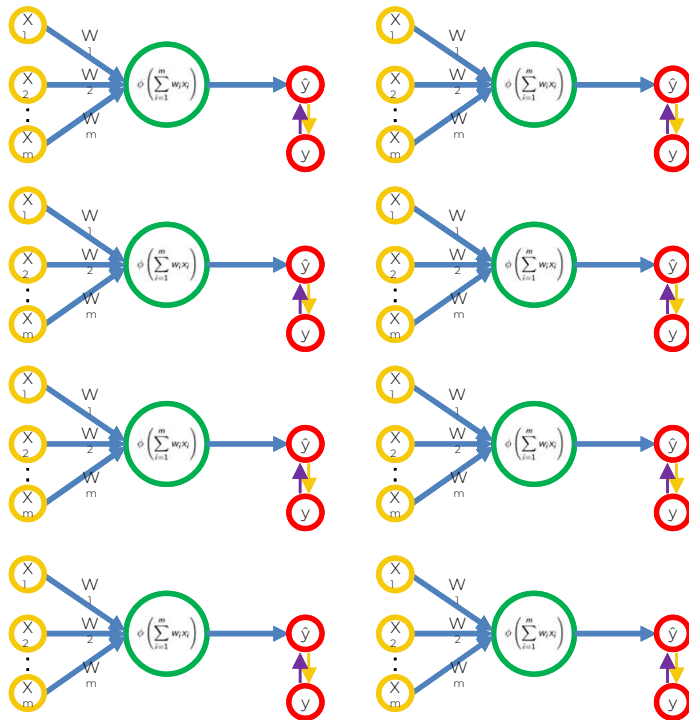


Gradient Descent

Gradient Descent

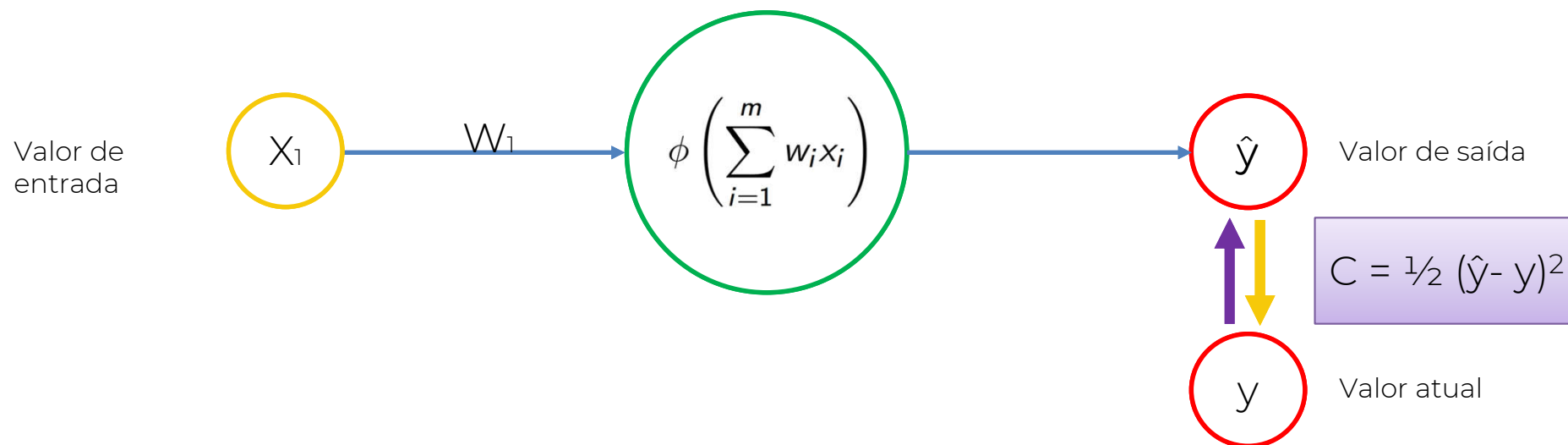


Row ID	Study Hrs	Sleep Hrs	Quiz	Exam
1	12	6	78%	93%
2	22	6.5	24%	68%
3	115	4	100%	95%
4	31	9	67%	75%
5	0	10	58%	51%
6	5	8	78%	60%
7	92	6	82%	89%
8	57	8	91%	97%

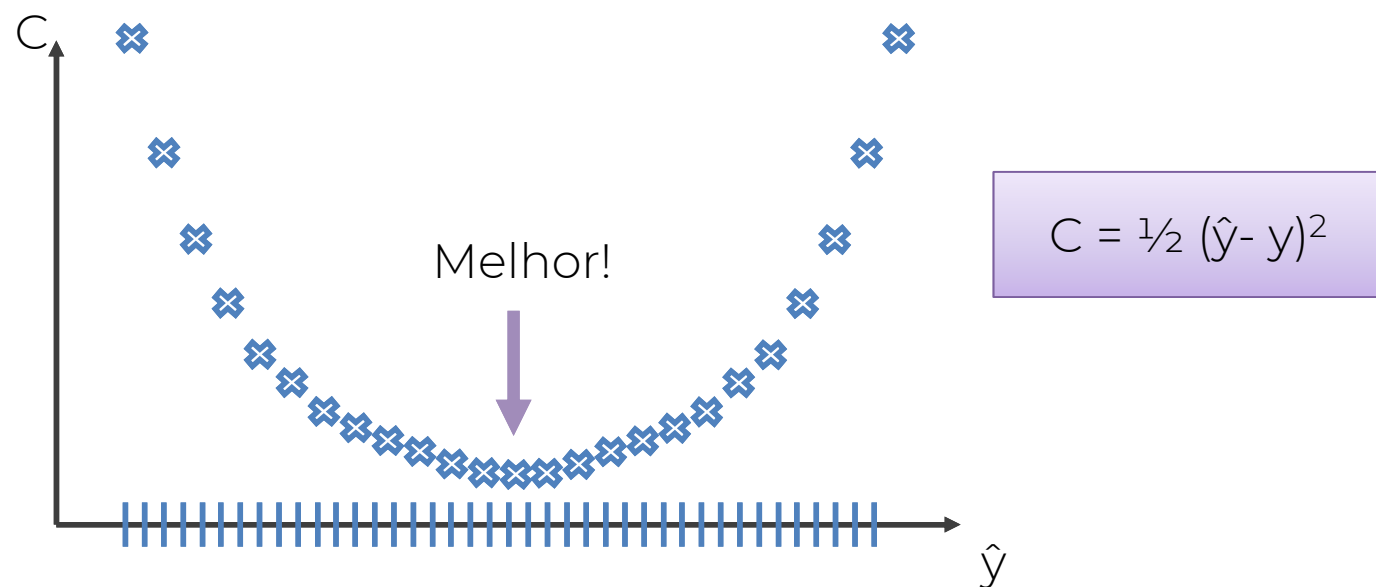
$$C = \sum \frac{1}{2} (\hat{y} - y)^2$$



Gradient Descent



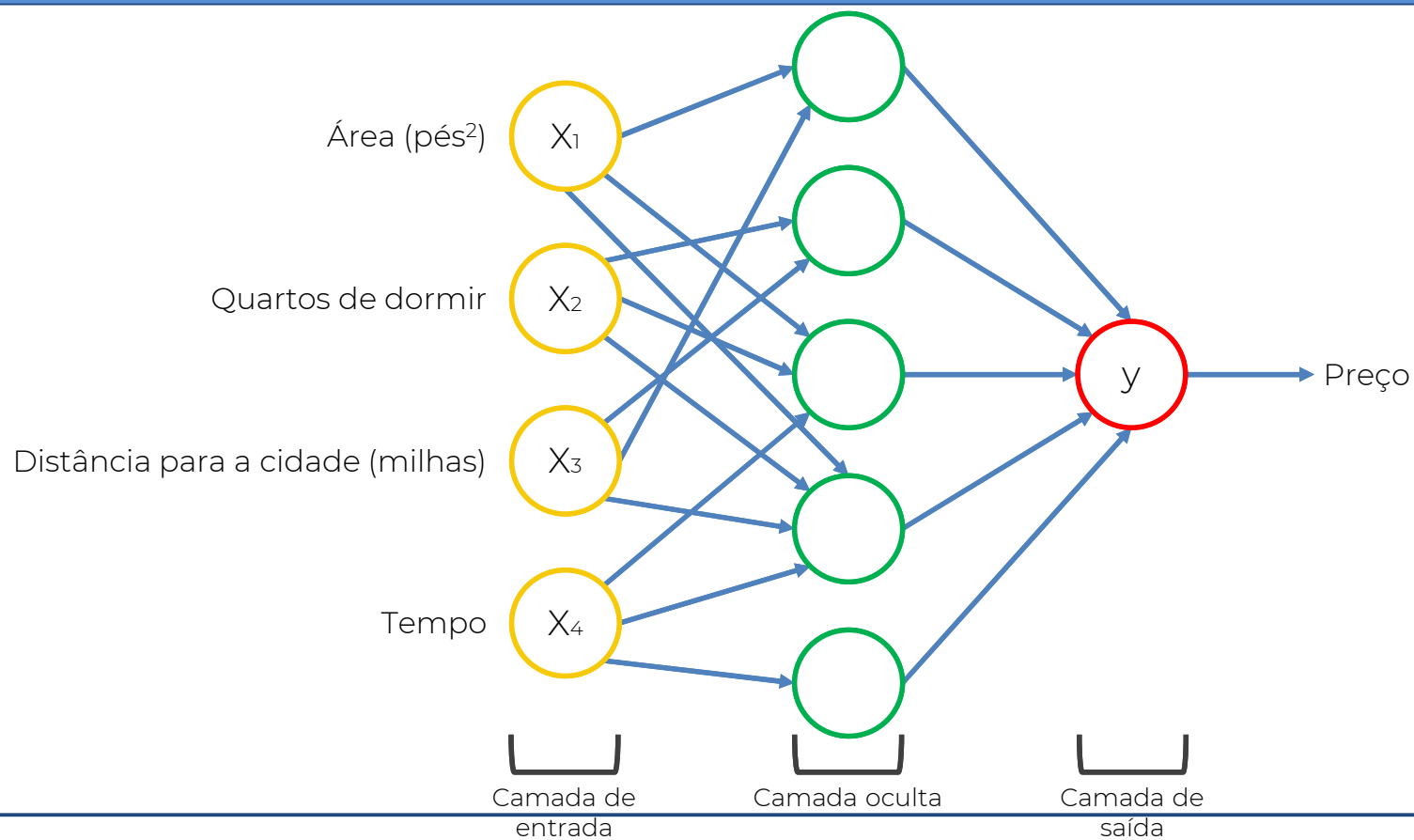
Gradient Descent



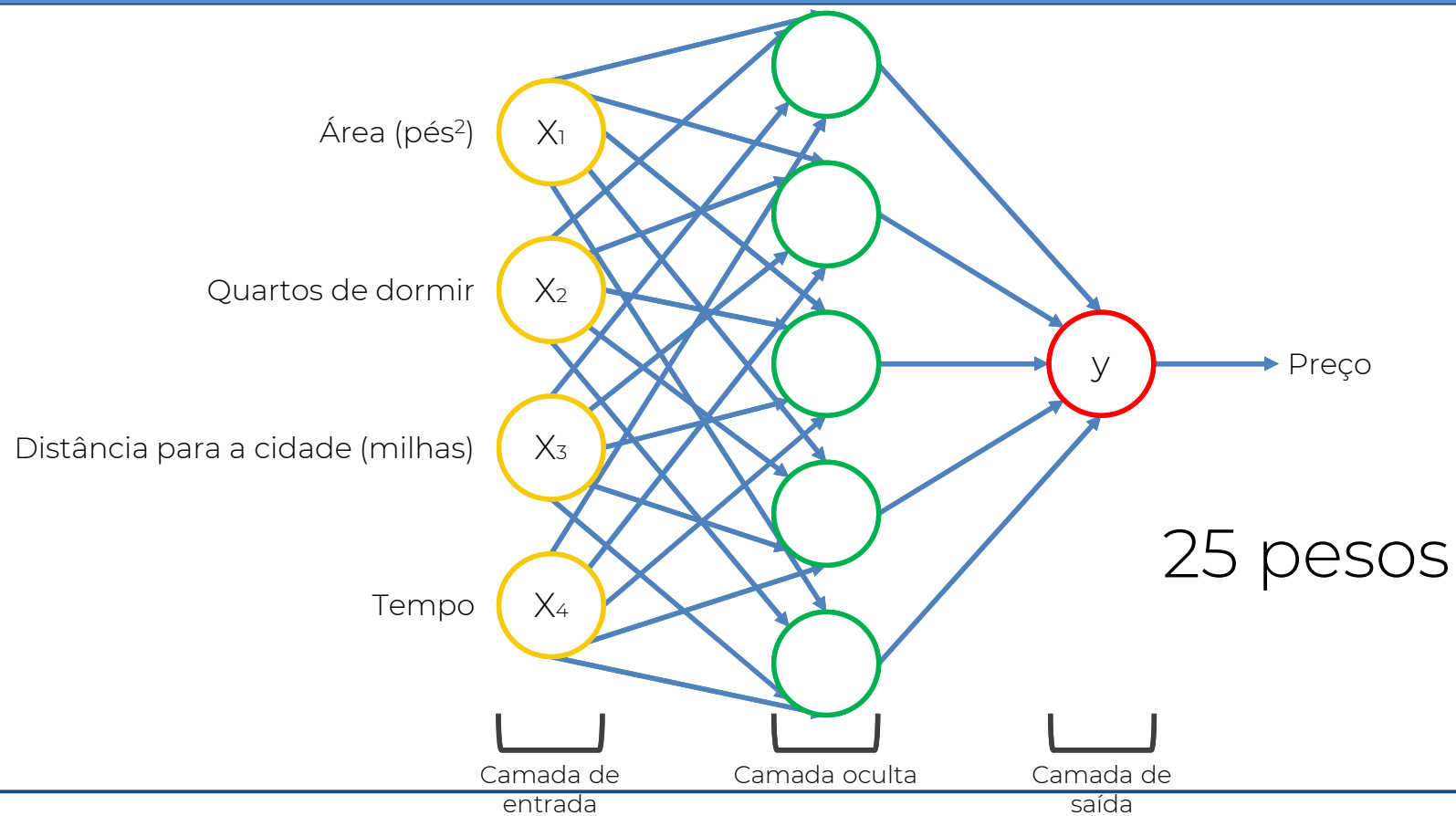
Gradient Descent

Maldição da dimensionalidade

Gradient Descent



Gradient Descent



Gradient Descent

$1.000 \times 1.000 \times \dots \times 1.000 = 1.000^{25} = 10^{75}$ combinações

Sunway TaihuLight: o super computador mais rápido do mundo

93 PFLOPS

93×10^{15}

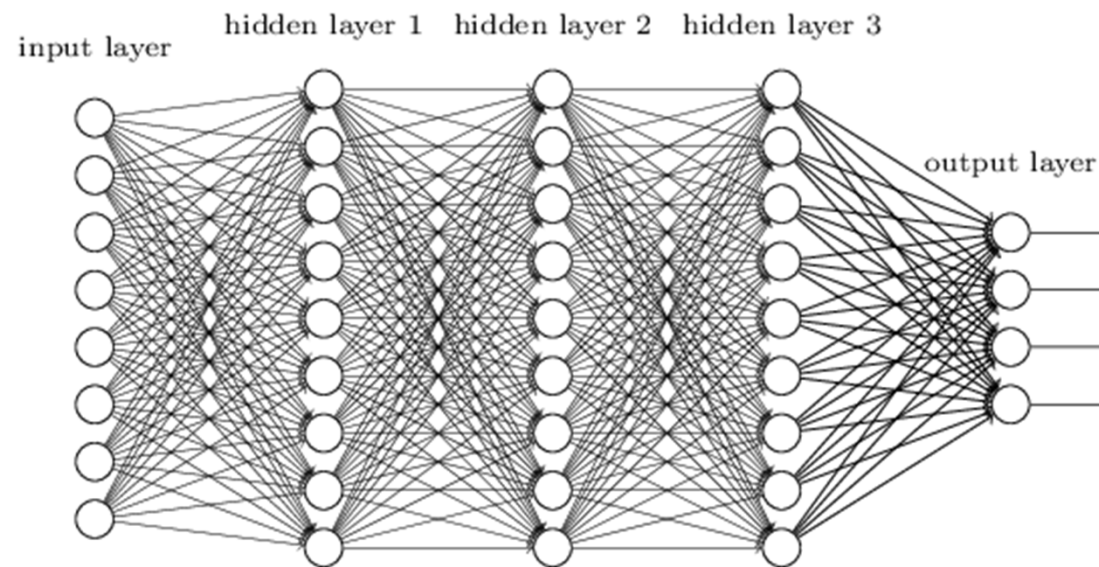
$10^{75} / (93 \times 10^{15})$

$= 1,08 \times 10^{58}$ segundos

$= 3,42 \times 10^{50}$ anos



Gradient Descent

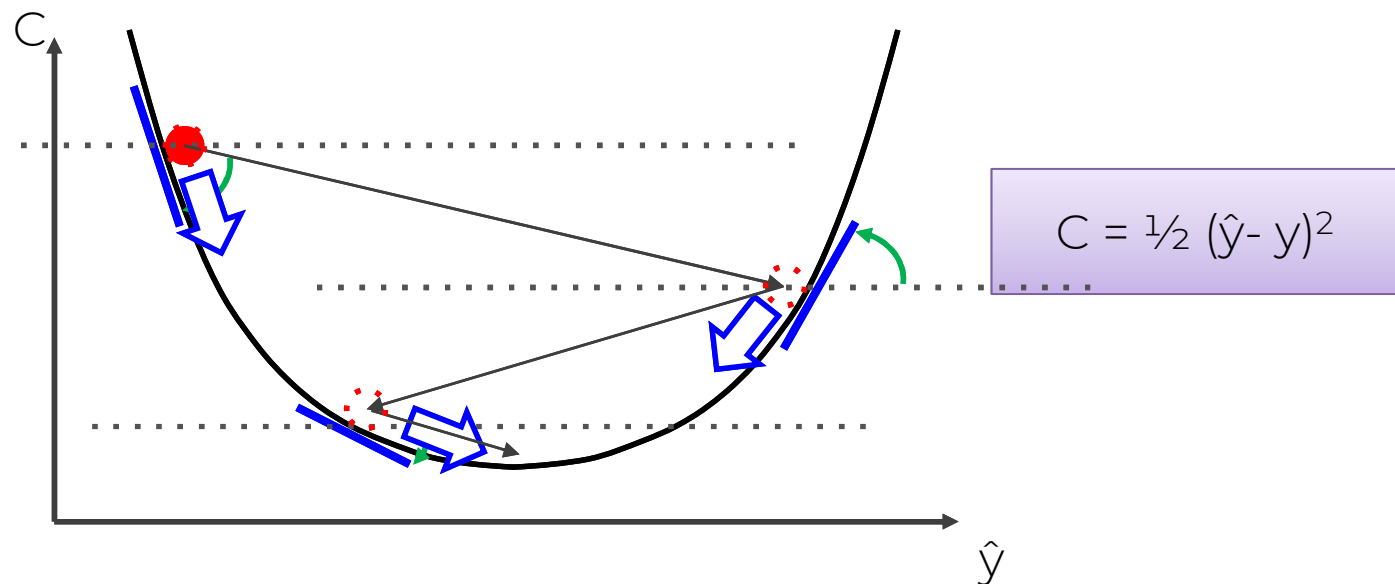


Fonte da imagem: neuralnetworksanddeeplearning.com

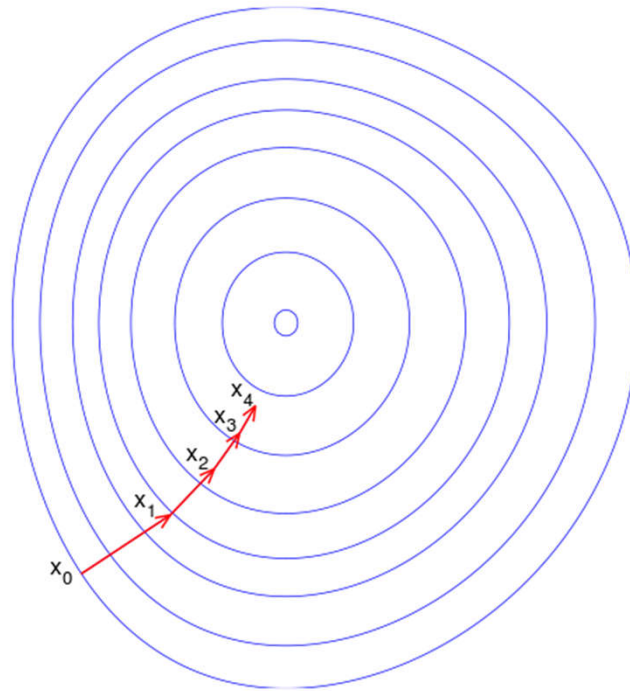
Gradient Descent

Gradient Descent

Gradient Descent



Gradient Descent



Gradient Descent

