An Efficient Parallel Algorithm for Secured Data Communications Using RSA Public Key Cryptography Method

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Algoritmos Paralelos

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$$x \Rightarrow z \mid z \approx x$$

$$x \Rightarrow y \Rightarrow z$$

$$y = s(Wx + b)$$

$$z = s(W^{'}y + b)$$

$$arg\,min\,E = \frac{1}{2}\sum_{i=1}^{n}(z_i - x_i)$$

$$\frac{\partial E}{\partial Wji} = \frac{\partial E}{\partial z} * \frac{\partial z}{\partial Neta} * \frac{\partial Neta}{\partial Wji}$$

$$\frac{\partial E}{\partial z} = (z - x)$$

$$\frac{\partial z}{\partial Neta} = (1 - z) * z$$

$$\frac{\partial Neta}{\partial Wji} = y$$

$$\frac{\partial E}{\partial Wji} = (z - x) * (1 - z) * z * y$$

$$\delta = (z - x) * (1 - z) * z$$

$$\frac{\partial E}{\partial Wji} = (\sum_{k=0}^{N} \delta_{ik} W_{ik}) * (1 - S_i) * S_i * S_{ji}$$

$$\delta = (\sum_{k=0}^{N} \delta_{ik} W_{ik}) * (1 - S_i) * S_i$$

$$E = -\sum_{i=0}^{n} (x_i \, log \, z_i + (1 - x_i) log(1 - z_i))$$

$$\frac{\partial E}{\partial z} = \frac{z - x}{(1 - z) * z}$$

$$\frac{\partial z}{\partial Neta} = (1 - z) * z$$

$$\frac{\partial Neta}{\partial Wji} = y$$

$$\frac{\partial E}{\partial Wji} = (z - x) * y$$

$$\delta = (z - x)$$

$$\frac{\partial E}{\partial Wji} = (\sum_{k=0}^{N} \delta_{ik} W_{ik}) * (S_i - x) * S_{ji}$$

$$\delta = (\sum_{k=0}^{N} \delta_{ik} W_{ik}) * (S_i - x)$$

Donde:
x es el vector de entrada
z es el vector de salida
s es la función de activación
y es el vector comprimido