demo_bp

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1 BP

`BPP58 - P64`

BP BP
X=$(x_1, x_2, ..., x_i, ..., x_n)^T$,$x_0 = -1$.
:Y=$(y_1, y_2, ..., y_j, ..., y_m)^T$,$y_0 = -1$.
:O=$(o_1, o_2, ..., o_k, ..., o_l)^T$.
VV=$(V_1, V_2, ..., V_j, ..., V_m)$.$V_j$j.
WV=$(W_1, W_2, ..., W_k, ..., W_l)$.$W_k$k.

$o_{k}=f(net_{k}) k=1,2,...,l $ (3.10)
$net_{k}=\sum{j=0}^m w{jk}y_{j}$ $k = 1, 2, ..., l$ (3.11)

$y_{j}=f(net_{j}) j=1,2,...,m $ (3.12)
$net_j = \sum_{i=0}^{n} v_{ij} x_i$ $j = 1, 2, ..., m$ (3.13)
Sigmoid
$f(x) = \frac{1}{1+e^{-x}}$ (3.14)
$f'(x) = f(x)(1 - f(x))$ (3.15)

BP

`BP`

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E,
$E = \frac{1}{2}(d - o)^2 = \frac{1}{2}\sum_{k=1}^{l}(d_k - o_k)^2$ (3.16)

$E=1\frac{}{2(d-o)^{2=1}\frac{}{2\Sigma}}$