2023_01_30 P2

Errores:

$\delta_1^2 = t_1 - s_1^2 = -1,0 - (-0,3145) = -0.6855$

$\delta_2^2 = t_2 - s_2^2 = 1,0 - 1,4804 = -0,4304$

$\delta_3^2 = t_3 - s_3^2 = -2,0 - (-0,9304) = -1,0696$

$\delta_1^1 = (\delta_1^2 \cdot \theta_{11}^2 + \delta_2^2 \theta_{21}^2 + \delta_3^2 \cdot \theta_{31}^2) \cdot s_1^1 \cdot (1 - s_1^1) = 0,3167$

$\delta_2^1 = (\delta_1^2 \cdot \theta_{12}^2 + \delta_2^2 \theta_{22}^2 + \delta_3^2 \cdot \theta_{32}^2) \cdot s_2^1 (1 - s_2^1) = -0,0049$

Pesos:

$\theta_{32}^2 = \theta_{32}^2 + \rho \delta_3^2 \cdot s_2^1 = -1 + 1 \cdot (-1,0696) \cdot 0,119 = -1,1273$

$\theta_{23}^1 = \theta_{23}^1 + \rho \delta_2^1 x_3 = -0,5 + 1 (-0,0049 \cdot 2,0) = -0,5098$

2023_01_16 P2

Salidas:

$\phi_1^1 = \theta_{10}^1 + \theta_{11}^1 x_1 + \theta_{12}^1 \cdot x_2 = 3$

$s_1^1 = \sigma(\phi_1^1) = 0.953$ (sigmoide)

$\phi_2^1 = \theta_{20}^1 + \theta_{21}^1 x_1 + \theta_{22}^1 x_2 = -1$

$s_2^1 = \sigma(\phi_2^1) = 0,269$ (sigmoide)

$\phi_1^2 = \theta_{10}^2 + \theta_{11}^2 \cdot s_1^1 + \theta_{12}^2 \cdot s_2^1 = 2,721$

$s_1^2 = \sigma(\phi_1^2) = 0,902$ (sigmoide)

$\phi_2^2 = \theta_{20}^2 + \theta_{21}^2 s_1^1 + \theta_{22}^2 s_2^1 = -0,222$

$s_2^2 = 6(\phi_2^2) = 0,445$ (sigmoide)

Errores:

$\delta_1^2 = (t_1 - s_1^2) \cdot s_1^2 (1 - s_1^2) = -0,029$

$\delta_2^2 = (t_2 - s_2^2) \cdot s_2^2 (1 - s_2^2) = 0,1124$

$\delta_1^1 = (\delta_1^2 \theta_{11}^2 + \delta_2^2 \theta_{21}^2) \cdot s_1^1 (1 - s_1^1) = -0,0082$

$\delta_2^1 = (\delta_1^2 \cdot \theta_{11}^2 + \delta_2^2 \theta_{22}^2) \cdot (s_2^1 (1 - s_2^1)) = -0,0360$

Pesos:

$\theta_{20}^1 = \theta_{20}^1 + \rho \delta_2^1 \cdot 1 = 0,964$

$\theta_{21}^1 = \theta_{21}^1 + \rho \delta_2^1 x_1 = -1,036$

$\theta_{22}^1 = \theta_{22}^1 + \rho \delta_2^1 x_2 = -1,036$

2022-01-24 P2

Salidas:

$\phi_1^1 = \theta_1 + \theta_2 x_2 = 2$

$S_1^1 = \sigma(\phi_1^1) = 0{,}880797$ (sigmoide)

$\phi_1^2 = \theta_4 + \theta_3 x_1 + \theta_5 S_1^1 = 1{,}8807$

$S_1^2 = 1{,}8807$ (lineal)

Errores:

$\delta_1^2 = (t_1 - S_1^2) = 1 - 1{,}8807 = 0{,}8809$

$\delta_2^1 = (\delta_1^2 \theta_5) \cdot S_1^1 \cdot (1 - S_1^1) = -0{,}05247$

Pesos:

$\theta_1 = \theta_1 + \rho\, \delta_1^1 (+1) = 0{,}90752$

$\theta_2 = \theta_2 + \rho\, \delta_1^1 x_2 = 0{,}90752$

$\theta_3 = \theta_3 + \rho \delta_1^2 x_1 = 1$

$\theta_4 = \theta_4 + \rho\, \delta_1^2 (+1) = 0{,}1192$

$\theta_5 = \theta_5 + \rho\, S_1^1 = 0{,}22419$

2022-01-10 P2

Salidas:

$\phi_1^1 = \theta_{11}^1 x_1 + \theta_{12}^1 x_2 + \theta_{10}^1 = 3$

$S_1^1 = \sigma(\phi_1^1) = 0{,}955$ (sigmoide)

$\phi_2^1 = \theta_{21}^1 x_1 + \theta_{22}^1 x_2 + \theta_{30}^1 = -3$

$S_2^1 = \sigma(\phi_2^1) = 0{,}047$ (sigmoide)

$\phi_3^1 = \theta_{31}^1 x_1 + \theta_{32}^1 x_2 + \theta_{30}^1 = 3$

$S_3^1 = 0{,}953$ (sigmoide)

$\phi_1^2 = \theta_{11}^2 S_1^1 + \theta_{12}^2 S_2^1 + \theta_{13}^2 S_3^1 + \theta_{10}^2 = 2{,}953$

$S_1^2 = \sigma(\phi_1^2) = 0{,}950$ (sigmoide)

Errores:

$\delta_1^2 = (t_1 - S_1^2) \cdot S_1^2 (1 - S_1^2) = 0{,}0023$

$\delta_2^2 = (t_2 - S_2^2) \cdot S_2^2 (1 - S_2^2) = -0{,}0023$

$\delta_1^1 = (\delta_1^2 \theta_{11}^2 + \delta_2^2 \theta_{21}^2) S_1^1 (1 - S_1^1) = 0{,}0002$

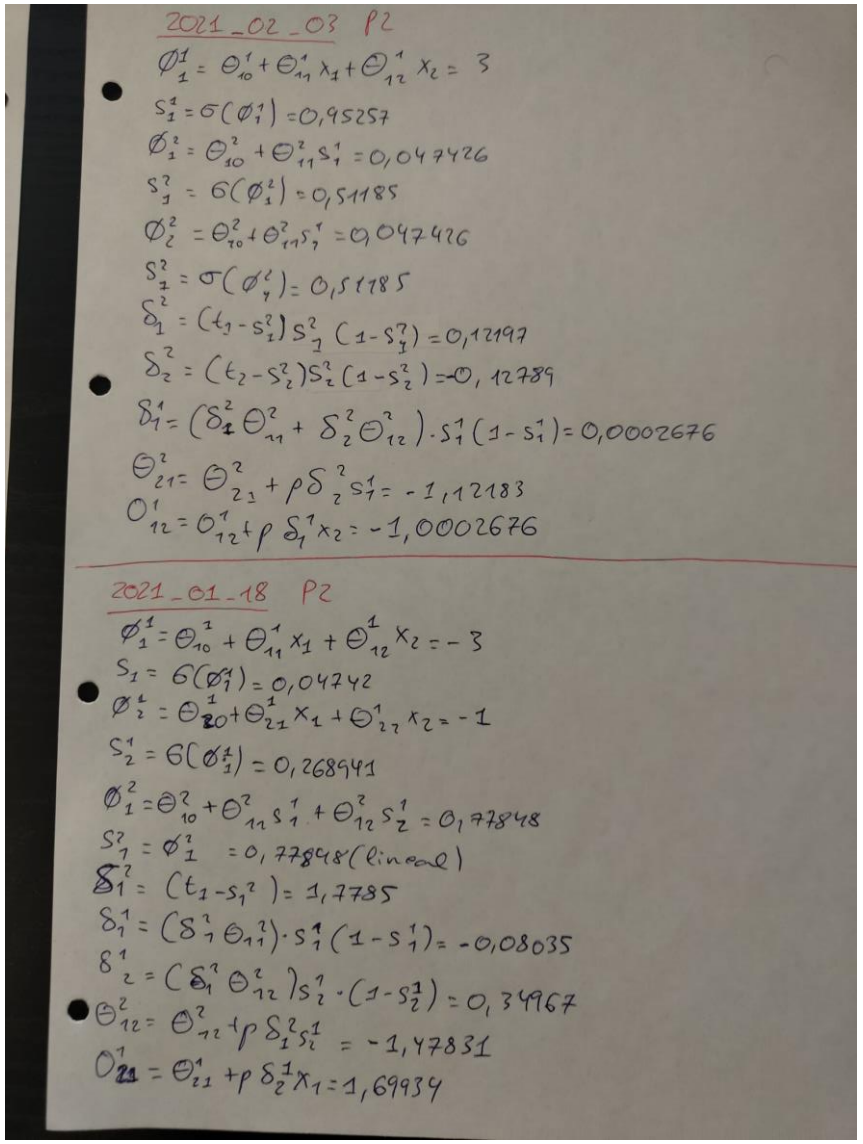
$\delta_2^1 = (\delta_1^2 \theta_{12}^2 + \delta_2^2 \theta_{22}^2) S_2^1 (1 - S_2^1) = 0{,}0002$

$\delta_3^1 = (\delta_1^2 \theta_{13}^2 + \delta_2^2 \theta_{23}^2) S_3^1 (1 - S_3^1) = 0{,}0002$

Pesos:

$\theta_{23}^2 = \theta_{23}^2 + \rho\, \delta_2^2 S_3^1 = -1{,}0022$

$\theta_{32}^1 = \theta_{32}^1 + \rho\, \delta_3^1 x_2 = 1{,}0002$



2021_02_03 P2

$\phi_1^1 = \theta_{10}^1 + \theta_{11}^1 x_1 + \theta_{12}^1 x_2 = 3$

$s_1^1 = \sigma(\phi_1^1) = 0,95257$

$\phi_1^2 = \theta_{10}^2 + \theta_{11}^2 s_1^1 = 0,047426$

$s_1^2 = \sigma(\phi_1^2) = 0,51185$

$\phi_2^2 = \theta_{10}^2 + \theta_{11}^2 s_1^1 = 0,047426$

$s_1^2 = \sigma(\phi_1^2) = 0,51185$

$\delta_1^2 = (t_1 - s_1^2) s_1^2 (1 - s_1^2) = 0,12197$

$\delta_2^2 = (t_2 - s_2^2) s_2^2 (1 - s_2^2) = -0,12789$

$\delta_1^1 = (\delta_1^2 \theta_{11}^2 + \delta_2^2 \theta_{12}^2) \cdot s_1^1 (1 - s_1^1) = 0,0002676$

$\theta_{21}^2 = \theta_{21}^2 + \rho \delta_2^2 s_1^1 = -1,12183$

$\theta_{12}^1 = \theta_{12}^1 + \rho \delta_1^1 x_2 = -1,0002676$

2021_01_18 P2

$\phi_1^1 = \theta_{10}^1 + \theta_{11}^1 x_1 + \theta_{12}^1 x_2 = -3$

$s_1 = \sigma(\phi_1^1) = 0,04742$

$\phi_2^1 = \theta_{20}^1 + \theta_{21}^1 x_1 + \theta_{22}^1 x_2 = -1$

$s_2^1 = \sigma(\phi_1^1) = 0,268941$

$\phi_1^2 = \theta_{10}^2 + \theta_{11}^2 s_1^1 + \theta_{12}^2 s_2^1 = 0,77848$

$s_1^2 = \phi_1^2 = 0,77848 (\text{lineal})$

$\delta_1^2 = (t_1 - s_1^2) = 1,7785$

$\delta_1^1 = (\delta_1^2 \theta_{11}^2) \cdot s_1^1 (1 - s_1^1) = -0,08035$

$\delta_2^1 = (\delta_1^2 \theta_{12}^2) s_2^1 \cdot (1 - s_2^1) = 0,34967$

$\theta_{12}^2 = \theta_{12}^2 + \rho \delta_1^2 s_2^1 = -1,47831$

$\theta_{21}^1 = \theta_{21}^1 + \rho \delta_2^1 x_1 = 1,69934$