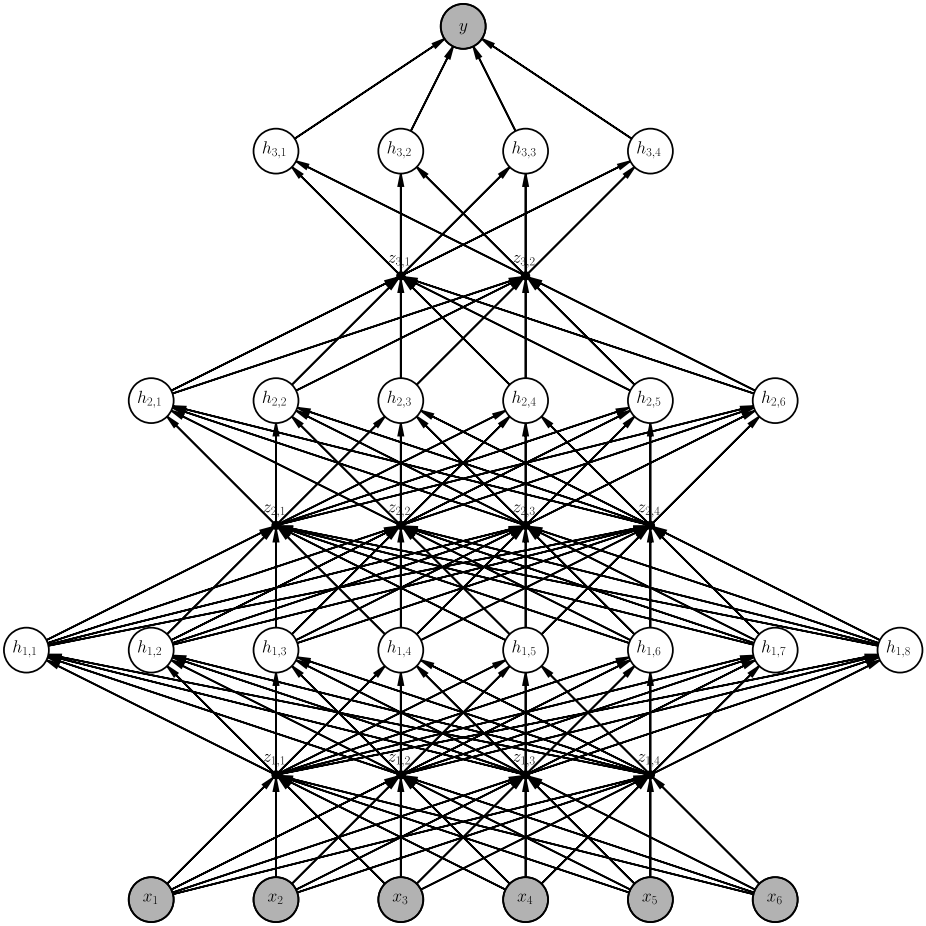

$$y = \mathbf{w}_4^\top \mathbf{h}_3$$

$$\mathbf{h}_3 = \boldsymbol{\phi}\left(\mathbf{U}_3 \mathbf{z}_3\right)$$

$$\mathbf{z}_2 = \mathbf{V}_3^\top \mathbf{h}_2$$

$$\mathbf{h}_2 = \boldsymbol{\phi}\left(\mathbf{U}_2 \mathbf{z}_2\right)$$

$$\mathbf{z}_2 = \mathbf{V}_2^\top \mathbf{h}_1$$

$$\mathbf{h}_1 = \boldsymbol{\phi}\left(\mathbf{U}_1 \mathbf{z}_1\right)$$

$$\mathbf{z}_1 = \mathbf{V}_1^\top \mathbf{x}$$

given $\mathbf{x}$