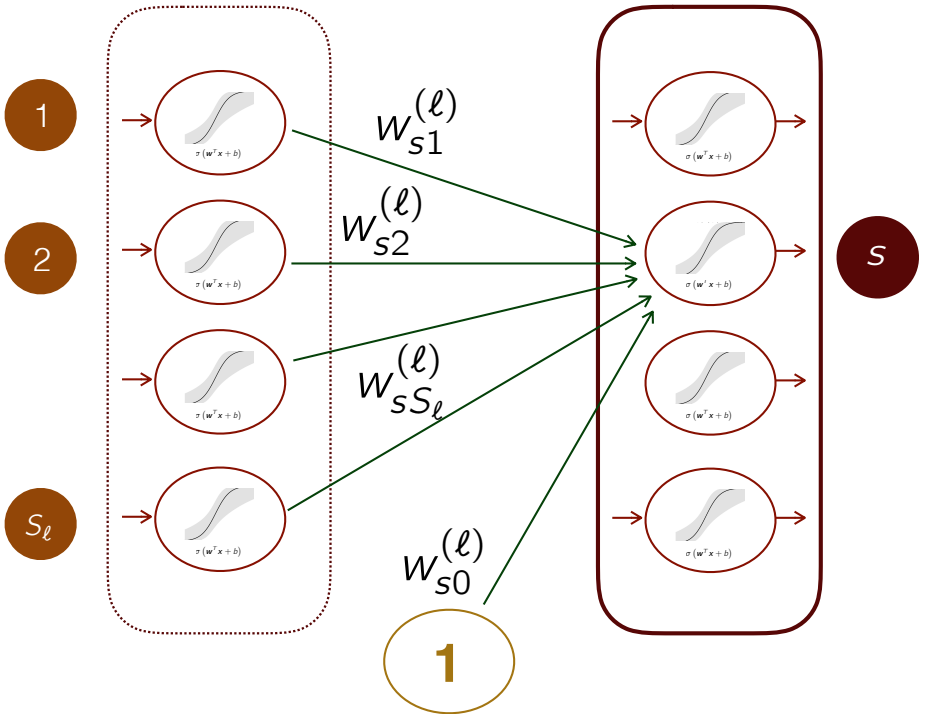
$$a^{(\ell+1)} = H^{(\ell)}(a^{(\ell)})$$



$$\boldsymbol{w}_s^{(\ell)} = (w_{s1}^{(\ell)}, w_{s2}^{(\ell)}, \ldots, w_{sS_\ell}^{(\ell)})^\top \in \mathbb{R}^{S_\ell}$$

$$\begin{aligned} a_s^{(\ell+1)} &= \sigma(\boldsymbol{w}_s^{(\ell)\top} \boldsymbol{a}^{(\ell)} + b_s^{(\ell)}) \\ &= \sigma\left(\sum_{t=1}^{S_\ell} w_{st}^{(\ell)} a_s^{(\ell)} + w_{s0}^{(\ell)}\right) \end{aligned}$$