

Human Reasoning and the Weak Completion Semantics II

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Exercise 7

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Problem 1

Given the program, \mathcal{P} :

$$\begin{aligned} &\{e \leftarrow \top, o \leftarrow \perp, \\ &\quad l \leftarrow e \wedge \neg ab_e, \\ &\quad l \leftarrow o \wedge \neg ab_o, \\ &\quad ab_e \leftarrow \perp, ab_e \leftarrow \neg o, \\ &\quad ab_o \leftarrow \perp, ab_o \leftarrow \neg e\}. \end{aligned}$$

Considering the active weighted connections from input-hidden and hidden-output layers to be w , and those from output-input layer to be 1, please construct a recurrent network, $\mathcal{N}_{\mathcal{P}}^{\cup}$ and:

- Illustrate every time step of the computation of its unique stable state while highlighting the activation patterns in each,
- Mention the sum of the weighted inputs of the active units in the output layer during the appropriate time steps.