Spaun: A biologically realistic large-scale functional brain model

Chris Eliasmith (Centre for Theoretical Neuroscience, University of Waterloo)
Trevor Bekolay, Xuan Choo, Terrence C. Stewart, Travis DeWolf, Yichuan Tang, Daniel Rasmussen, Jan Gosmann

Spaun is a network of 2.5 million interconnected artificial spiking neurons. Spaun performs tasks like humans and makes mistakes like humans. Spaun can perform 8 cognitive tasks using only visual information and without external intervention.

1. **Copy drawing**
   - A 0 [?]
   - A 2 [?]

2. **Image recognition**
   - A 2 [2]?
   - A 3 [1]?

3. **Gambling**
   - A 2 [2]?
   - A 3 [1]?

4. **List memory**
   - A 4 [3]?
   - A 5 [4]?

5. **Counting**
   - A 6 [5]?
   - A 7 [6]?

6. **Rapid variable creation**
   - A 8 [7]?
   - A 9 [8]?

7. **Fluid reasoning**
   - A 10 [9]?
   - A 11 [10]?

Spaun can be used to study how the brain works, as it can be manipulated in order to test hypotheses in neuroscience.

Recent developments

- **General instruction processing**
- **Conductance neuron model**

Chris Eliasmith, Terrence C. Stewart, Xuan Choo, Trevor Bekolay, Travis DeWolf, Yichuan Tang, and Daniel Rasmussen (2012).


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