NeurOS™ and NeuroBlocks™
A Neural Operating System and Building Blocks*

Build cognitive functions...
...by linking reusable modules...
...into directed neural graphs

NeuroBlocks reusable modules

Neuron spiking rates and NeurOS event coding

NeurOS Memory Module Types

<table>
<thead>
<tr>
<th>Working Memory</th>
<th>Short-term activation persistence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sets</td>
<td>Concurrent features in any order</td>
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<tr>
<td></td>
<td>Semantic range: any/OR, a few, some, many, most, all/AND</td>
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<tr>
<td>Sequences</td>
<td>Time-independent feature sequences</td>
</tr>
<tr>
<td></td>
<td>Parameters: non-exact sequence matching</td>
</tr>
<tr>
<td>Temporal Sequences</td>
<td>Time-relative feature sequences</td>
</tr>
<tr>
<td></td>
<td>Parameters: non-exact matching, speed range</td>
</tr>
<tr>
<td>Reify</td>
<td>Inverse: generate pattern features e.g., feedback to commingle with inputs</td>
</tr>
</tbody>
</table>

Breadth of usage, sub-assemblies

perception
working memory
pattern learning and matching
words and sequences
phrases/concepts
prediction
synonyms, naming
conjunction-disjunction
classification
behavior context priming
state modulation
teaching
batch/online learning
concentration/interruption
imagination
search enhancement
association chaining

Demos

Motion tracking
Behavior
Anagrams
Crossword puzzles
Cousins
Name That Tune

NeurOS architecture

development tools
neural graphs
distributed
multi-process
single-process
open, portable, scalable, embeddable, extensible

www.Cognivity.technology