Resource Summary Report

Generated by RRID on Apr 19, 2025

Open Source Brain

RRID:SCR_001393
Type: Tool

Proper Citation

Open Source Brain (RRID:SCR_001393)

Resource Information

URL: http://www.opensourcebrain.org

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Description: A resource for sharing and collaboratively developing computational models of neural systems. While models can be submitted and developed in any format, the use of open standards such as NeuroML and PyNN is encouraged, to ensure transparency, modularity, accessibility and cross simulator portability. OSB will provide advanced facilities to analyze, visualize and transform models in these formats, and to connect researchers interested in models of specific neurons, brain regions and disease states. Research themes include: Basal ganglia modelling, Cerebellar Granule cell modelling, Cerebellar modelling, Hippocampal modelling, Neocortical modelling, Whole brain models. Additional themes are welcome.

Abbreviations: OSB

Synonyms: OpenSourceBrain

Resource Type: data repository, storage service resource, database, service resource, data or information resource

Keywords: model, neuroml, pynn, computational model, neural system, neuron, disease, data analysis service, visualization, 3d explorer, network, ion channel distribution, ion channel, microcircuit

Funding: Wellcome Trust

Availability: Open unspecified license, The community can contribute to this resource

Resource Name: Open Source Brain

Resource ID: SCR_001393

Alternate IDs: nlx_152590

Record Creation Time: 20220129T080207+0000

Record Last Update: 20250419T054817+0000

Ratings and Alerts

No rating or validation information has been found for Open Source Brain.

No alerts have been found for Open Source Brain.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 25 mentions in open access literature.

Listed below are recent publications. The full list is available at RRID.

Sinha A, et al. (2025) The NeuroML ecosystem for standardized multi-scale modeling in neuroscience. eLife, 13.

Birgiolas J, et al. (2023) NeuroML-DB: Sharing and characterizing data-driven neuroscience models described in NeuroML. PLoS computational biology, 19(3), e1010941.

, et al. (2021) 30th Annual Computational Neuroscience Meeting: CNS*2021-Meeting Abstracts. Journal of computational neuroscience, 49(Suppl 1), 3.

Gleeson P, et al. (2019) Open Source Brain: A Collaborative Resource for Visualizing, Analyzing, Simulating, and Developing Standardized Models of Neurons and Circuits. Neuron, 103(3), 395.

Einevoll GT, et al. (2019) The Scientific Case for Brain Simulations. Neuron, 102(4), 735.

Dura-Bernal S, et al. (2019) NetPyNE, a tool for data-driven multiscale modeling of brain circuits. eLife, 8.

Blundell I, et al. (2018) Code Generation in Computational Neuroscience: A Review of Tools and Techniques. Frontiers in neuroinformatics, 12, 68.

Sherfey JS, et al. (2018) DynaSim: A MATLAB Toolbox for Neural Modeling and Simulation. Frontiers in neuroinformatics, 12, 10.

Cantarelli M, et al. (2018) Geppetto: a reusable modular open platform for exploring neuroscience data and models. Philosophical transactions of the Royal Society of London. Series B, Biological sciences, 373(1758).

Antolík J, et al. (2018) Arkheia: Data Management and Communication for Open Computational Neuroscience. Frontiers in neuroinformatics, 12, 6.

Manninen T, et al. (2018) Challenges in Reproducibility, Replicability, and Comparability of Computational Models and Tools for Neuronal and Glial Networks, Cells, and Subcellular Structures. Frontiers in neuroinformatics, 12, 20.

Gutzen R, et al. (2018) Reproducible Neural Network Simulations: Statistical Methods for Model Validation on the Level of Network Activity Data. Frontiers in neuroinformatics, 12, 90.

Manninen T, et al. (2017) Reproducibility and Comparability of Computational Models for Astrocyte Calcium Excitability. Frontiers in neuroinformatics, 11, 11.

Sharpee TO, et al. (2016) 25th Annual Computational Neuroscience Meeting: CNS-2016. BMC neuroscience, 17 Suppl 1(Suppl 1), 54.

Ferguson KA, et al. (2015) Network models provide insights into how oriens-lacunosum-moleculare and bistratified cell interactions influence the power of local hippocampal CA1 theta oscillations. Frontiers in systems neuroscience, 9, 110.

Asai Y, et al. (2015) Databases for multilevel biophysiology research available at Physiome.jp. Frontiers in physiology, 6, 251.

Ramaswamy S, et al. (2015) The neocortical microcircuit collaboration portal: a resource for rat somatosensory cortex. Frontiers in neural circuits, 9, 44.

Suslak TJ, et al. (2015) Piezo Is Essential for Amiloride-Sensitive Stretch-Activated Mechanotransduction in Larval Drosophila Dorsal Bipolar Dendritic Sensory Neurons. PloS one, 10(7), e0130969.

Smith LS, et al. (2015) Why sharing matters for electrophysiological data analysis. Brain research bulletin, 119(Pt B), 145.

Szigeti B, et al. (2014) OpenWorm: an open-science approach to modeling Caenorhabditis elegans. Frontiers in computational neuroscience, 8, 137.