# Resource Summary Report

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## NeuralEnsemble

RRID:SCR_001382
Type: Tool

### Proper Citation

NeuralEnsemble (RRID:SCR_001382)

### Resource Information

**URL:** http://neuralensemble.org/

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**Description:** Community-based initiative to promote and co-ordinate open-source software development in neuroscience hosting a number of software projects for computational and systems neuroscience, including PyNN, NeuroTools, Brian, Neo, OpenElectrophy, libNeuroML and Sumatra. Some of the projects use their Trac installation, others are on GitHub. By grouping these projects together under the NeuralEnsemble umbrella, the aim is to maximize interoperability and build components that can easily be combined into powerful systems for brain simulations and advanced data analysis. An annual CodeJam workshop is organized, bringing together scientists, graduate students, and scientific programmers to share ideas, present their work, and write code together. These workshops have been hugely effective in catalyzing open-source neuroscience software development. There is a NeuralEnsemble Google group for discussion of collaborative neuroscience software development (mainly in Python, but users of other languages are welcome!) and to provide software support.

**Abbreviations:** Resource:NeuralEnsemble

**Synonyms:** neuralensemble.org

**Resource Type:** community building portal, training resource, data or information resource, software resource, workshop, portal

**Keywords:** software development, software, neuroscience, computational neuroscience, systems neuroscience, python, open source, programming, code sharing, simulation, neural modelling

**Funding:** BrainScaleS project

**Resource Name:** NeuralEnsemble

**Resource ID:** SCR_001382

**Alternate IDs:** nlx_152550

**Record Creation Time:** 20220129T080207+0000

**Record Last Update:** 20260729T044010+0000

## Ratings and Alerts

No rating or validation information has been found for NeuralEnsemble.

No alerts have been found for NeuralEnsemble.

## Data and Source Information

**Source:** SciCrunch Registry

## Usage and Citation Metrics

We found 11 mentions in open access literature.

**Listed below are recent publications.** The full list is available at nidm-terms .

Romani A, et al. (2024) Community-based reconstruction and simulation of a full-scale model of the rat hippocampus CA1 region. PLoS biology, 22(11), e3002861.

Gill JP, et al. (2020) neurotic: Neuroscience Tool for Interactive Characterization. eNeuro, 7(3).

Tanimura A, et al. (2019) Cholinergic Interneurons Amplify Thalamostriatal Excitation of Striatal Indirect Pathway Neurons in Parkinson's Disease Models. Neuron, 101(3), 444.

Verduzco-Flores S, et al. (2019) Draculab: A Python Simulator for Firing Rate Neural Networks With Delayed Adaptive Connections. Frontiers in neuroinformatics, 13, 18.

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

Vlachos I, et al. (2013) Neural system prediction and identification challenge. Frontiers in neuroinformatics, 7, 43.

Halchenko YO, et al. (2012) Open is Not Enough. Let's Take the Next Step: An Integrated, Community-Driven Computing Platform for Neuroscience. Frontiers in neuroinformatics, 6, 22.

Davison AP, et al. (2009) Trends in programming languages for neuroscience simulations. Frontiers in neuroscience, 3(3), 374.

Drewes R, et al. (2009) Brainlab: A Python Toolkit to Aid in the Design, Simulation, and Analysis of Spiking Neural Networks with the NeoCortical Simulator. Frontiers in

neuroinformatics, 3, 16.

Jurica P, et al. (2009) OMPC: an Open-Source MATLAB-to-Python Compiler. Frontiers in neuroinformatics, 3, 5.

Br??derle D, et al. (2009) Establishing a novel modeling tool: a python-based interface for a neuromorphic hardware system. Frontiers in neuroinformatics, 3, 17.