Resource Summary Report

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Code Analysis Repository and Modelling for e-Neuroscience

RRID:SCR_002795
Type: Tool

Proper Citation

Code Analysis Repository and Modelling for e-Neuroscience (RRID:SCR_002795)

Resource Information

URL: http://www.carmen.org.uk/

Proper Citation: Code Analysis Repository and Modelling for e-Neuroscience (RRID:SCR_002795)

Description: THIS RESOURCE IS NO LONGER IN SERVICE.Documented on January 14, 2023. Infrastructure for sharing data, tools and services, this virtual research environment (VRE) supports e-Neuroscience and is designed to provide services for data and processing of that data. While the system is initially focused on electrophysiology data (neural activity recordings are the primary data types), it is equally applicable to many domains outside neuroscience. The Portal Provides: * User login and customization. * Data upload/download. * Data handling including custom permissions for public, shared or private data. * The ability to invoke custom public, shared or private services that consume and produce data. For example, it would allow spike series to be run through a sorter, producing new data representing the sorted spikes. * The ability to host services written in a number of languages including, but not limited to Matlab, R, Python, Perl, Java. * A system to support metadata for data objects, which provides extensive support for entering metadata at the point of upload, and allows the generation of metadata from services to provide provenance information. * The ability to invoke additional visualization for the data, for example, via the Signal Data Explorer. A core part is the development of: (i) minimum reporting guidelines for annotation of data and other computational resources for the purpose of sharing, and; (ii) intermediate formats and APIs for translation between proprietary and bespoke data types. These recommendations are being implemented and the global community is encouraged both to engage in their specification and make use of them for their own data sharing systems. * MINI: Minimum Information about a Neuroscience Investigation - This framework represents the formalized opinion of the CARMEN consortium and its associates, and identifies the minimum reporting information required to support the use of electrophysiology

in a neuroscience study, for submission to the CARMEN system. * NDTF: Neurophysiology Data Translation Format - This framework provides a vendor-independent mechanism for translating between raw and processed neurphysiology data in the form of time and image series. They are implementing NDTF in CARMEN but it may also be useful for third party applications.

Abbreviations: CARMEN

Synonyms: Code Analysis Repository & Modelling for E-Neuroscience

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

Defining Citation: PMID:20679128, PMID:18674883

Keywords: neural activity recording, signal, image series, neurophysiology, data sharing, metadata standard, collaboration, electrophysiology, FASEB list

Funding: EPSRC EP/E002331/1

Availability: THIS RESOURCE IS NO LONGER IN SERVICE, Account required, GNU General Public License, The community can contribute to this resource

Resource Name: Code Analysis Repository and Modelling for e-Neuroscience

Resource ID: SCR_002795

Alternate IDs: nif-0000-00442

Record Creation Time: 20220129T080215+0000

Record Last Update: 20250509T055546+0000

Ratings and Alerts

No rating or validation information has been found for Code Analysis Repository and Modelling for e-Neuroscience.

No alerts have been found for Code Analysis Repository and Modelling for e-Neuroscience.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 28 mentions in open access literature.

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

Dragly SA, et al. (2018) Experimental Directory Structure (Exdir): An Alternative to HDF5 Without Introducing a New File Format. Frontiers in neuroinformatics, 12, 16.

Pu J, et al. (2018) NDDN: A Cloud-Based Neuroinformation Database for Developing Neuronal Networks. Journal of healthcare engineering, 2018, 3839094.

Lidster K, et al. (2016) Opportunities for improving animal welfare in rodent models of epilepsy and seizures. Journal of neuroscience methods, 260, 2.

Charlesworth P, et al. (2016) Canalization of genetic and pharmacological perturbations in developing primary neuronal activity patterns. Neuropharmacology, 100, 47.

Mahmud M, et al. (2016) Processing and Analysis of Multichannel Extracellular Neuronal Signals: State-of-the-Art and Challenges. Frontiers in neuroscience, 10, 248.

Edwin Thanarajah S, et al. (2016) Abnormal Connectional Fingerprint in Schizophrenia: A Novel Network Analysis of Diffusion Tensor Imaging Data. Frontiers in psychiatry, 7, 114.

Takemiya M, et al. (2016) BrainLiner: A Neuroinformatics Platform for Sharing Time-Aligned Brain-Behavior Data. Frontiers in neuroinformatics, 10, 3.

Mezey G, et al. (2015) Challenges to undertaking randomised trials with looked after children in social care settings. Trials, 16, 206.

Tomsett RJ, et al. (2015) Virtual Electrode Recording Tool for EXtracellular potentials (VERTEX): comparing multi-electrode recordings from simulated and biological mammalian cortical tissue. Brain structure & function, 220(4), 2333.

Lim S, et al. (2015) Preferential detachment during human brain development: age- and sex-specific structural connectivity in diffusion tensor imaging (DTI) data. Cerebral cortex (New York, N.Y. : 1991), 25(6), 1477.

Adams C, et al. (2015) Electrographic waveform structure predicts laminar focus location in a model of temporal lobe seizures in vitro. PloS one, 10(3), e0121676.

Teeters JL, et al. (2015) Neurodata Without Borders: Creating a Common Data Format for Neurophysiology. Neuron, 88(4), 629.

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

Peraza LR, et al. (2014) fMRI resting state networks and their association with cognitive fluctuations in dementia with Lewy bodies. NeuroImage. Clinical, 4, 558.

Sobolev A, et al. (2014) Integrated platform and API for electrophysiological data. Frontiers

in neuroinformatics, 8, 32.

Sobolev A, et al. (2014) Data management routines for reproducible research using the G-Node Python Client library. Frontiers in neuroinformatics, 8, 15.

Kaiser M, et al. (2013) The potential of the human connectome as a biomarker of brain disease. Frontiers in human neuroscience, 7, 484.

Bohr IJ, et al. (2012) Resting-state functional connectivity in late-life depression: higher global connectivity and more long distance connections. Frontiers in psychiatry, 3, 116.

Mahmud M, et al. (2012) SigMate: a Matlab-based automated tool for extracellular neuronal signal processing and analysis. Journal of neuroscience methods, 207(1), 97.

Zhang X, et al. (2012) A computational study on altered theta-gamma coupling during learning and phase coding. PloS one, 7(6), e36472.