

Resource Summary Report

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BrainLiner

RRID:SCR_004951

Type: Tool

Proper Citation

BrainLiner (RRID:SCR_004951)

Resource Information

URL: <http://brainliner.jp>

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Description: Portal and tools for sharing and editing neurophysiological and behavioral data for brain-machine interface research. Users can search for existing data or login with their Google, Facebook, or Twitter account and upload new data. Their main focus is on supporting brain-machine interface research, so we encourage users to not just provide recordings of brain activity data, but also information about stimuli, etc., so that statistical relationships can be found between stimuli and/or subject behavior and brain activity. The Matlab tools are for writing, reading, and converting Neuroshare files, the common file format. A free, open source desktop tool for editing neurophysiological data for brain-machine interface research is also available: <https://github.com/ATR-DNI/BrainLiner> Since data formats aren't standardized between programs and researchers, data and analysis programs for data cannot be easily shared. Neuroshare was selected as the common file format. Neuroshare can contain several types of neurophysiological data because of its high flexibility, including analog time-series data and neuronal spike timing. Some applications have plug-ins or libraries available that can read Neuroshare format files, thus making Neuroshare somewhat readily usable. Neuroshare can contain several types of neurophysiological data, but there were no easy tools to convert data into the Neuroshare format, so they made and are providing a Neuroshare Converter Library and Simple Converter using the library. In future work they will make and provide many more useful tools for data sharing. Shared experiments include: EMG signal, Takemiya Exp, Reconstruct (Visual image reconstruction from human brain activity using a combination of multi-scale local image decoders), SPIKE data, Speech Imagery Dataset (Single-trial classification of vowel speech imagery using common spatial patterns), Functional Multineuron Calcium Imaging (fMCI), Rock-paper-scissors (The data was obtained from subject while he make finger-form of rock/paper/scissors). They also have a page at <https://www.facebook.com/brainliner> where you can contact us

Abbreviations: BrainLiner

Synonyms: BrainLiner.jp

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

Defining Citation: [PMID:26858636](#)

Keywords: brain-machine interface, brain, behavior, neurophysiology, electromyography, fmri, speech, vision, memory, neuron, eeg, electrocorticography, food tracking task, food tracking, task, meg, mutielectrode, nirs, optical imaging, pet, time-series data, neuronal spike timing, data sharing, manipulation, data set, metadata standard, neuroscience, matlab

Funding: Japanese Ministry of Education Culture Sports Science and Technology MEXT

Availability: GNU General Public License, The community can contribute to this resource

Resource Name: BrainLiner

Resource ID: SCR_004951

Alternate IDs: nlx_91840

Record Creation Time: 20220129T080227+0000

Record Last Update: 20260803T040412+0000

Ratings and Alerts

No rating or validation information has been found for BrainLiner.

No alerts have been found for BrainLiner.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 7 mentions in open access literature.

Listed below are recent publications. The full list is available at [PRECISE-TBI](#) .

Seeliger K, et al. (2018) Generative adversarial networks for reconstructing natural images from brain activity. *NeuroImage*, 181, 775.

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

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

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

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

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

Campagnola L, et al. (2014) ACQ4: an open-source software platform for data acquisition and analysis in neurophysiology research. *Frontiers in neuroinformatics*, 8, 3.