Brain Observatory Storage Service and Database (BossDB)

RRID:SCR_017273
Type: Tool

Proper Citation

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Resource Information

URL: https://bossdb.org/

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Description: BossDB (Brain Observatory Storage Service and Database) is a cloud-based ecosystem for the storage and management of public large-scale volumetric neuroimaging and connectomics datasets. This includes volumetric Electron Microscopy and X-Ray Micro/Nanotomography data with support for multi-channel image data, segmentations, annotations, meshes, and connectomes. BossDB integrates with community resources for data access, processing, visualization, and analysis, and includes an API that enables metadata management, rendering, datatype conversions, and ingest.

Abbreviations: BossDB, bossDB, BOSS DB

Synonyms: Brain Observatory Storage Service, bossDB, Block and Object Storage Service, BOSSDB, Block and Object Storage Service Database, Brain Observatory Storage Service and Database, BossDB

Resource Type: data repository, image, storage service resource, data or information resource, database, 3d spatial image, service resource

Defining Citation: DOI:10.1101/217745

Keywords: Johns Hopkins University Applied Physics Laboratory, JHU/APL, database, electron microscopy, xray, data, storage, archive, BRAIN Initiative, EM, XRM, XNH, ecosystem

Availability: Open

Resource Name: Brain Observatory Storage Service and Database (BossDB)

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Alternate URLs: https://github.com/jhuapl-boss/boss/

Record Creation Time: 20220129T080334+0000

Record Last Update: 20250422T060018+0000

Ratings and Alerts

No rating or validation information has been found for Brain Observatory Storage Service and Database (BossDB).

No alerts have been found for Brain Observatory Storage Service and Database (BossDB).

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 24 mentions in open access literature.

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

Iyer S, et al. (2024) The BRAIN Initiative data-sharing ecosystem: Characteristics, challenges, benefits, and opportunities. eLife, 13.

Guittari NK, et al. (2024) Nanoscale Connectomics Annotation Standards Framework. ArXiv.

Son R, et al. (2024) Morphomics via next-generation electron microscopy. Journal of molecular cell biology, 15(12).

Wildenberg G, et al. (2023) The Development of Synapses in Mouse and Macaque Primary Sensory Cortices. bioRxiv : the preprint server for biology.

Lackey EP, et al. (2023) Cerebellar circuits for disinhibition and synchronous inhibition.

bioRxiv : the preprint server for biology.

Hawrylycz M, et al. (2023) A guide to the BRAIN Initiative Cell Census Network data ecosystem. PLoS biology, 21(6), e3002133.

Spirou GA, et al. (2023) High-resolution volumetric imaging constrains compartmental models to explore synaptic integration and temporal processing by cochlear nucleus globular bushy cells. eLife, 12.

Jwa AS, et al. (2022) The spectrum of data sharing policies in neuroimaging data repositories. Human brain mapping, 43(8), 2707.

Osorno T, et al. (2022) Candelabrum cells are ubiquitous cerebellar cortex interneurons with specialized circuit properties. Nature neuroscience, 25(6), 702.

Hider R, et al. (2022) The Brain Observatory Storage Service and Database (BossDB): A Cloud-Native Approach for Petascale Neuroscience Discovery. Frontiers in neuroinformatics, 16, 828787.

Ishibashi M, et al. (2022) Analysis of rod/cone gap junctions from the reconstruction of mouse photoreceptor terminals. eLife, 11.

Sanchez M, et al. (2022) Connectomics Annotation Metadata Standardization for Increased Accessibility and Queryability. Frontiers in neuroinformatics, 16, 828458.

Bishop C, et al. (2021) CONFIRMS: A Toolkit for Scalable, Black Box Connectome Assessment and Investigation. Annual International Conference of the IEEE Engineering in Medicine and Biology Society. IEEE Engineering in Medicine and Biology Society. Annual International Conference, 2021, 2444.

Wildenberg G, et al. (2021) Partial connectomes of labeled dopaminergic circuits reveal non-synaptic communication and axonal remodeling after exposure to cocaine. eLife, 10.

Matelsky JK, et al. (2021) DotMotif: an open-source tool for connectome subgraph isomorphism search and graph queries. Scientific reports, 11(1), 13045.

Matelsky JK, et al. (2021) An Integrated Toolkit for Extensible and Reproducible Neuroscience. Annual International Conference of the IEEE Engineering in Medicine and Biology Society. IEEE Engineering in Medicine and Biology Society. Annual International Conference, 2021, 2413.

Witvliet D, et al. (2021) Connectomes across development reveal principles of brain maturation. Nature, 596(7871), 257.

Phelps JS, et al. (2021) Reconstruction of motor control circuits in adult Drosophila using automated transmission electron microscopy. Cell, 184(3), 759.

Matelsky JK, et al. (2020) A substrate for modular, extensible data-visualization. Big data analytics, 5.

Prasad JA, et al. (2020) A three-dimensional thalamocortical dataset for characterizing brain heterogeneity. Scientific data, 7(1), 358.