Resource Summary Report

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iBEAT

RRID:SCR_002470
Type: Tool

Proper Citation

iBEAT (RRID:SCR_002470)

Resource Information

URL: http://www.med.unc.edu/bric/ideagroup/free-softwares/libra-longitudinal-infant-brain-processing-package

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Description: A toolbox with graphical user interfaces for processing infant brain MR images. Longitudinal (or single-time-point) multimodality (including T1, T2, and FA) (or single-modality) data can be processed using the toolbox. Main functions of the software (step by step) include image preprocessing, brain extraction, tissue segmentation and brain labeling. Linux operating system (64 bit) is required. A workstation or server with memory >8G is recommended for processing many images simutaneously. The graphical user interfaces and overall framework of the software are implemented in MATLAB. The image processing functions are implemented with the combination of C/C++, MATLAB, Perl and Shell languages. Parallelization technologies are used in the software to speed up image processing.

Abbreviations: iBEAT

Synonyms: Infant Brain Extraction and Analysis Toolbox, LIBRA, iBEAT: Infant Brain Extraction and Analysis Toolbox

Resource Type: data processing software, image analysis software, image processing software, software application, software resource, software toolkit

Defining Citation: PMID:23055044

Keywords: atlas application, atlas data, data resource, image display, information resource, magnetic resonance, registration, segmentation, spatial transformation, visualization, warping, mri, infant, brain

Availability: THIS RESOURCE IS NO LONGER IN SERVICE

Resource Name: iBEAT

Resource ID: SCR_002470

Alternate IDs: nlx_155851

Alternate URLs: http://www.nitrc.org/projects/ibeat

Record Creation Time: 20220129T080213+0000

Record Last Update: 20260919T194959+0000

Ratings and Alerts

No rating or validation information has been found for iBEAT.

No alerts have been found for iBEAT.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 39 mentions in open access literature.

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

Tung SS, et al. (2026) How do infant brains fold? Sulcal deepening is linked to development of sulcal span, thickness, curvature, and microstructure. Communications biology, 9(1), 258.

Bandrey DS, et al. (2026) Protocol and Preliminary Findings from the BrainPALS Study in Very Preterm Children: A Randomized Controlled Trial of a Digital Parenting Program. Children (Basel, Switzerland), 13(6).

Hendrickson TJ, et al. (2026) BIBSNet: A deep learning baby image brain segmentation network for MRI scans. Developmental cognitive neuroscience, 79, 101706.

Zika S, et al. (2026) Cortical and white matter myelination proceed in concert during early infancy. Nature communications, 17(1).

Manoli A, et al. (2026) Cerebellar growth is associated with domain-specific cerebral maturation and socio-linguistic behavior. Nature communications, 17(1).

Daniel-Hertz E, et al. (2025) An Eccentricity Gradient Reversal across High-Level Visual Cortex. The Journal of neuroscience : the official journal of the Society for Neuroscience, 45(2).

Pujol J, et al. (2025) Unraveling the impact of prenatal air pollution for neonatal brain maturation. Environment international, 204, 109801.

Yin W, et al. (2025) Charting brain functional development from birth to 6???years of age. Nature human behaviour, 9(6), 1246.

Perez K, et al. (2025) Hierarchical microstructural tissue growth of the gray and white matter of human visual cortex during the first year of life. bioRxiv : the preprint server for biology.

Werder EJ, et al. (2025) Early life phthalate exposure impacts gray matter and white matter volume in infants and young children. Environmental research, 279(Pt 2), 121826.

de Boer A, et al. (2025) A method to measure renal inner medullary perfusion using MR renography. Magma (New York, N.Y.), 38(5), 791.

Sun L, et al. (2025) Population-specific brain charts reveal Chinese-Western differences in neurodevelopmental trajectories. bioRxiv : the preprint server for biology.

Ellis CT, et al. (2025) Movies reveal the fine-grained organization of infant visual cortex. eLife, 12.

Kubota E, et al. (2024) White matter connections of human ventral temporal cortex are organized by cytoarchitecture, eccentricity, and category-selectivity from birth. bioRxiv : the preprint server for biology.

Abate F, et al. (2024) UNITY: A low-field magnetic resonance neuroimaging initiative to characterize neurodevelopment in low and middle-income settings. Developmental cognitive neuroscience, 69, 101397.

Kelly CE, et al. (2024) Cortical growth from infancy to adolescence in preterm and term-born children. Brain : a journal of neurology, 147(4), 1526.

Sun L, et al. (2023) Functional connectome through the human life span. bioRxiv : the preprint server for biology.

Sun Y, et al. (2023) Self-supervised learning with application for infant cerebellum segmentation and analysis. Nature communications, 14(1), 4717.

Ahmad S, et al. (2023) Multifaceted atlases of the human brain in its infancy. Nature methods, 20(1), 55.

Jiang W, et al. (2023) Mapping the evolution of regional brain network efficiency and its association with cognitive abilities during the first twenty-eight months of life. Developmental cognitive neuroscience, 63, 101284.