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

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: 20260803T040320+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 34 mentions in open access literature.

Listed below are recent publications. The full list is available at [ASWG] .

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).

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.

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

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

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.

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.

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.

Wang Y, et al. (2023) Longitudinal development of the cerebellum in human infants during the first 800 days. Cell reports, 42(4), 112281.

Grotheer M, et al. (2022) White matter myelination during early infancy is linked to spatial gradients and myelin content at birth. Nature communications, 13(1), 997.

Chen L, et al. (2022) A 4D infant brain volumetric atlas based on the UNC/UMN baby connectome project (BCP) cohort. NeuroImage, 253, 119097.

Corrigan NM, et al. (2022) Brain myelination at 7 months of age predicts later language development. NeuroImage, 263, 119641.

Natu VS, et al. (2021) Infants' cortex undergoes microstructural growth coupled with myelination during development. Communications biology, 4(1), 1191.