Resource Summary Report

Generated by FDI Lab - SciCrunch.org on Apr 3, 2025

Internet Brain Segmentation Repository

RRID:SCR_001994
Type: Tool

Proper Citation

Internet Brain Segmentation Repository (RRID:SCR_001994)

Resource Information

URL: http://www.nitrc.org/projects/ibsr

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Description: Data set of manually-guided expert segmentation results along with magnetic resonance brain image data. Its purpose is to encourage the development and evaluation of segmentation methods by providing raw test and image data, human expert segmentation results, and methods for comparing segmentation results. Please see the MediaWiki for more information. This repository is meant to contain standard test image data sets which will permit a standardized mechanism for evaluation of the sensitivity of a given analysis method to signal to noise ratio, contrast to noise ratio, shape complexity, degree of partial volume effect, etc. This capability is felt to be essential to further development in the field since many published algorithms tend to only operate successfully under a narrow range of conditions which may not extend to those experienced under the typical clinical imaging setting. This repository is also meant to describe and discuss methods for the comparison of results.

Abbreviations: IBSR

Resource Type: data set, data or information resource

Keywords: 3d model, anatomy, brainstem, cerebellum, cortex, gray matter, imaging, morphology, mri, segmentation, volume, white matter, adult human, male, child, image collection, application, magnetic resonance, os independent, php, quality metrics, segmentation, test data, web service

Related Condition: Normal, Tumor

Funding: NINDS 1 R01 NS34189-01

Availability: Public Domain

Resource Name: Internet Brain Segmentation Repository

Resource ID: SCR_001994

Alternate IDs: nif-0000-00032

Old URLs: http://www.cma.mgh.harvard.edu/ibsr/

Record Creation Time: 20220129T080210+0000

Record Last Update: 20250403T060126+0000

Ratings and Alerts

No rating or validation information has been found for Internet Brain Segmentation Repository.

No alerts have been found for Internet Brain Segmentation Repository.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 23 mentions in open access literature.

Listed below are recent publications. The full list is available at FDI Lab - SciCrunch.org.

Novosad P, et al. (2020) Accurate and robust segmentation of neuroanatomy in T1-weighted MRI by combining spatial priors with deep convolutional neural networks. Human brain mapping, 41(2), 309.

Kong Y, et al. (2018) Automatic brain tissue segmentation based on graph filter. BMC medical imaging, 18(1), 9.

Serag A, et al. (2017) SEGMA: An Automatic SEGMentation Approach for Human Brain MRI Using Sliding Window and Random Forests. Frontiers in neuroinformatics, 11, 2.

Mendrik AM, et al. (2015) MRBrainS Challenge: Online Evaluation Framework for Brain Image Segmentation in 3T MRI Scans. Computational intelligence and neuroscience, 2015, 813696.

Yazdani S, et al. (2015) A Unified Framework for Brain Segmentation in MR Images. Computational and mathematical methods in medicine, 2015, 829893.

Fillmore PT, et al. (2015) Age-specific MRI brain and head templates for healthy adults from 20 through 89 years of age. Frontiers in aging neuroscience, 7, 44.

Maji P, et al. (2015) Rough-fuzzy clustering and unsupervised feature selection for wavelet based MR image segmentation. PloS one, 10(4), e0123677.

Yazdani S, et al. (2014) Magnetic resonance image tissue classification using an automatic method. Diagnostic pathology, 9, 207.

Govindarajan KA, et al. (2014) Effect of intrinsic and extrinsic factors on global and regional cortical thickness. PloS one, 9(5), e96429.

Kasiri K, et al. (2013) A hybrid hierarchical approach for brain tissue segmentation by combining brain atlas and least square support vector machine. Journal of medical signals and sensors, 3(4), 232.

Amiri S, et al. (2013) An Automated MR Image Segmentation System Using Multi-layer Perceptron Neural Network. Journal of biomedical physics & engineering, 3(4), 115.

El Harchaoui NE, et al. (2013) Unsupervised approach data analysis based on fuzzy possibilistic clustering: application to medical image MRI. Computational intelligence and neuroscience, 2013, 435497.

Lin X, et al. (2013) Nonrigid medical image registration based on mesh deformation constraints. Computational and mathematical methods in medicine, 2013, 373082.

Winston GP, et al. (2013) Automated hippocampal segmentation in patients with epilepsy: available free online. Epilepsia, 54(12), 2166.

Eggert LD, et al. (2012) Accuracy and reliability of automated gray matter segmentation pathways on real and simulated structural magnetic resonance images of the human brain. PloS one, 7(9), e45081.

Shahvaran Z, et al. (2012) Region-based Active Contour Model based on Markov Random Field to Segment Images with Intensity Non-Uniformity and Noise. Journal of medical signals and sensors, 2(1), 17.

Narayana PA, et al. (2012) Regional cortical thickness in relapsing remitting multiple sclerosis: A multi-center study. NeuroImage. Clinical, 2, 120.

Ashburner J, et al. (2011) Diffeomorphic registration using geodesic shooting and Gauss-

Newton optimisation. NeuroImage, 55(3), 954.

Balafar MA, et al. (2011) Spatial based expectation maximizing (EM). Diagnostic pathology, 6, 103.

Chupin M, et al. (2009) Automatic segmentation of the hippocampus and the amygdala driven by hybrid constraints: method and validation. NeuroImage, 46(3), 749.