

Resource Summary Report

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ROBEX

RRID:SCR_002534

Type: Tool

Proper Citation

ROBEX (RRID:SCR_002534)

Resource Information

URL: <http://www.jeiglesias.com>

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Description: An automatic whole-brain extraction tool for T1-weighted MRI data (commonly known as skull stripping). Whole-brain segmentation is often the first component in neuroimage pipelines and therefore, its robustness is critical for the overall performance of the system. Many methods have been proposed in the literature, but they often: * work well on certain datasets but fail on others. * require case-specific parameter tuning ROBEX aims for robust skull-stripping across datasets with no parameter settings. It fits a triangular mesh, constrained by a shape model, to the probabilistic output of a supervised brain boundary classifier. Because the shape model cannot perfectly accommodate unseen cases, a small free deformation is subsequently allowed. The deformation is optimized using graph cuts.

Abbreviations: ROBEX

Synonyms: Robust Brain Extraction (ROBEX), Robust Brain Extraction

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

Defining Citation: [PMID:21880566](#)

Keywords: magnetic resonance, mri, skull stripping, classification, segmentation, brain, skull

Availability: Free, Available for download, Freely available

Resource Name: ROBEX

Resource ID: SCR_002534

Alternate IDs: nlx_155939

Alternate URLs: <http://www.nitrc.org/projects/robex>

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Record Creation Time: 20220129T080213+0000

Record Last Update: 20260805T044041+0000

Ratings and Alerts

No rating or validation information has been found for ROBEX.

No alerts have been found for ROBEX.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 3 mentions in open access literature.

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

Willard C, et al. (2025) Combined magnetic resonance imaging and serum analysis reveals distinct multiple sclerosis types. *Brain : a journal of neurology*, 148(12), 4578.

Nguyen KP, et al. (2022) Patterns of Pretreatment Reward Task Brain Activation Predict Individual Antidepressant Response: Key Results From the EMBARC Randomized Clinical Trial. *Biological psychiatry*, 91(6), 550.

Mancini M, et al. (2020) A multimodal computational pipeline for 3D histology of the human brain. *Scientific reports*, 10(1), 13839.