## **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

Proper Citation: ROBEX (RRID:SCR\_002534)

**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:** data processing software, image processing software, software application, software resource, image analysis software, segmentation software

Defining Citation: PMID:21880566

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

Funding:

Availability: GNU Lesser General Public License, GNU General Public License, BSD License

Resource Name: ROBEX

Resource ID: SCR\_002534

Alternate IDs: nlx\_155939

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

Record Creation Time: 20220129T080213+0000

Record Last Update: 20250523T054247+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 2 mentions in open access literature.

Listed below are recent publications. The full list is available at <u>NIF</u>.

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.