Resource Summary Report

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Medical Image Visualization and Analysis

RRID:SCR_002315
Type: Tool

Proper Citation

Medical Image Visualization and Analysis (RRID:SCR_002315)

Resource Information

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

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Description: Software package that is a powerful graphical interface that displays, segments, aligns, manipulates, and blends image (pixel) and geometry (real-world coordinates) data simultaneously. Several applications are directly built into MIVA. Registration modes include interactive affine transformations. Fiducial registration tools facilitate rapid alignments for inter-modality volumes. Interactive Region of Interst (ROI) and Volume-of-Interest (VOI) tools exist to segment medical images. Virtually unique to MIVA are its 3D geometry tools and their compatibility with pixel based medical images. A full 3D interactive rat brain atlas is in an fMRI module which walks one through the necessary steps of fMRI. A multiple material surface routine takes segmented medical slices and creates 3D triangulated surfaces that align along all region boarders without overlap or gaps. These surfaces are the direct input into the MIVA tetrahedral mesh generator.

Abbreviations: MIVA

Resource Type: atlas, software application, data or information resource, image analysis software, data processing software, software resource

Keywords: magnetic resonance, fmri, graphical interface, display, segment, align, manipulate, blend, registration, alignment, region of interst, volume of interest, 3d geometry tool, 3d

Funding:

Availability: BSD License

Resource Name: Medical Image Visualization and Analysis

Resource ID: SCR_002315

Alternate IDs: nlx_155664

Record Creation Time: 20220129T080212+0000

Record Last Update: 20250524T055852+0000

Ratings and Alerts

No rating or validation information has been found for Medical Image Visualization and Analysis.

No alerts have been found for Medical Image Visualization and Analysis.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 8 mentions in open access literature.

Listed below are recent publications. The full list is available at NIF.

Ma Z, et al. (2018) Temporal transitions of spontaneous brain activity. eLife, 7.

Kenkel WM, et al. (2016) Functional magnetic resonance imaging in awake transgenic fragile X rats: evidence of dysregulation in reward processing in the mesolimbic/habenular neural circuit. Translational psychiatry, 6(3), e763.

Crenshaw DG, et al. (2015) Effects of low doses of pioglitazone on resting-state functional connectivity in conscious rat brain. PloS one, 10(2), e0117973.

Yee JR, et al. (2015) Identifying the integrated neural networks involved in capsaicin-induced pain using fMRI in awake TRPV1 knockout and wild-type rats. Frontiers in systems neuroscience, 9, 15.

Ferris CF, et al. (2015) Distinct BOLD Activation Profiles Following Central and Peripheral Oxytocin Administration in Awake Rats. Frontiers in behavioral neuroscience, 9, 245.

Bruijnzeel AW, et al. (2014) Acute nicotine administration increases BOLD fMRI signal in brain regions involved in reward signaling and compulsive drug intake in rats. The international journal of neuropsychopharmacology, 18(2).

Kamnaksh A, et al. (2014) Diffusion tensor imaging reveals acute subcortical changes after mild blast-induced traumatic brain injury. Scientific reports, 4, 4809.

Nephew BC, et al. (2012) Cocaine sensitization increases kyphosis and modulates neural activity in adult nulliparous rats. Brain sciences, 2(4), 667.