Computational Morphometry Toolkit

RRID:SCR_002234
Type: Tool

Proper Citation

Computational Morphometry Toolkit (RRID:SCR_002234)

Resource Information

URL: http://neuro.debian.net/pkgs/cmtk.html

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Description: A software toolkit for computational morphometry of biomedical images, CMTK comprises a set of command line tools and a back-end general-purpose library for processing and I/O. The command line tools primarily provide the following functionality: registration (affine and nonrigid; single and multi-channel; pairwise and groupwise), image correction (MR bias field estimation; interleaved image artifact correction; EPI unwarping), processing (filters; combination of segmentations via voting and STAPLE; shape-based averaging), statistics (t-tests; general linear model). CMTK is implemented in C++ with parallel processing using POSIX Threads (SMP), OpenMP (SMP), Grand Central Dispatch (SMP), and CUDA (GPU). Supported file formats include Analyze (r/w), NIFTI (r/w), Nrrd (r/w), DICOM (read), BioRad (read). Data exchange with other toolkits, such as ITK, FSL, AFNI, SPM, etc. is thus easily accomplished.

Abbreviations: CMTK

Synonyms: Computational Morphometry Toolkit (CMTK)

Resource Type: software resource, software application, software toolkit
**Keywords:** reusable library, analyze, anatomic, artifact removal, atlas application, c, c++, console (text based), cygwin, dicom, domain independent, format conversion, image display, image reconstruction, image-to-image, labeling, linear, linux, macos, microsoft, magnetic resonance, nifti-1, nrrd, posix/unix-like, principal component analysis, region of interest, registration, regression, resampling, segmentation, sh/bash, spatial transformation, statistical operation, sunos/solaris, two dimensional display, unix shell, visualization, warping, win32 (ms windows), windows, workflow

**Availability:** Available for download

**Resource Name:** Computational Morphometry Toolkit

**Resource ID:** SCR_002234

**Alternate IDs:** nlx_155536

**Alternate URLs:** http://www.nitrc.org/projects/cmtk, https://sources.debian.org/src/cmtk/

**Record Creation Time:** 20220129T080212+0000

**Record Last Update:** 20240617T053200+0000

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**Ratings and Alerts**


No alerts have been found for Computational Morphometry Toolkit.

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**Data and Source Information**

**Source:** [SciCrunch Registry](http://www.nitrc.org/projects/cmtk)

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**Usage and Citation Metrics**

We found 27 mentions in open access literature.

**Listed below are recent publications.** The full list is available at [FDI Lab - SciCrunch.org](http://www.nitrc.org/projects/cmtk).


Campbell PD, et al. (2023) Mitochondrial proteins encoded by the 22q11.2 neurodevelopmental locus regulate neural stem and progenitor cell proliferation. Molecular


Heap LAL, et al. (2018) Luminance Changes Drive Directional Startle through a Thalamic