

Resource Summary Report

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Medical Image Processing and Visualization

RRID:SCR_002055

Type: Tool

Proper Citation

Medical Image Processing and Visualization (RRID:SCR_002055)

Resource Information

URL: <http://www.mevislab.de/index.php?id=6>

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Description: Modular framework for the development of image processing algorithms and visualization and interaction methods, with a special focus on medical imaging. It includes advanced medical imaging modules for segmentation, registration, volumetry, and quantitative morphological and functional analysis. The platform allows fast integration and testing of new algorithms and the development of application prototypes that can be used in clinical environments. In MeVisLab, individual image processing, visualization and interaction modules can be combined to complex image processing networks using a graphical programming approach. The algorithms can easily be integrated using a modular, platform-independent C++ class library. An abstract, hierarchical definition language allows the design of efficient graphical user interfaces, hiding the complexity of the underlying module network to the end user. JavaScript components can be added to implement dynamic functionality on both the network and the user interface level.

MeVisLab is based on the Qt application framework, the OpenInventor 3D visualization toolkit and OpenGL. Several clinical prototypes have been realized on the basis of MeVisLab, including software assistants for neuro-imaging, dynamic image analysis, surgery planning, and vessel analysis. Feature Overview: :- Basic image processing algorithms and advanced medical imaging modules :- Full featured, flexible 2D/3D visualization and interaction tools :- High performance for large datasets :- Modular, expandable C++ image processing library :- Graphical programming of complex, hierarchical module networks :- Object-oriented GUI definition and scripting :- Full scripting functionality using Python and JavaScript :- DICOM support and PACS integration :- Intuitive user interface :- Integrated movie and screenshot generation for demonstration purposes :- Generic integration of the Insight Toolkit (ITK) and the Visualization Toolkit (VTK) :- Cross-platform support for Windows, Linux, and MacOS X :- Available for 64-bit operating systems

Abbreviations: MeVisLab

Synonyms: MeVisLab: Medical Image Processing and Visualization

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

Defining Citation: [PMID:17356215](#)

Keywords: algorithm, image processing, visualization, image, segmentation, morphological, functional, analysis, neuroimaging, surgery, python, volume rendering, prototype

Availability: THIS RESOURCE IS NO LONGER IN SERVICE

Resource Name: Medical Image Processing and Visualization

Resource ID: SCR_002055

Alternate IDs: nif-0000-00326

Record Creation Time: 20220129T080211+0000

Record Last Update: 20260912T195536+0000

Ratings and Alerts

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

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

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 [SPARC SAWG](#) .

Dieleman N, et al. (2016) Qualitative Evaluation of a High-Resolution 3D Multi-Sequence Intracranial Vessel Wall Protocol at 3 Tesla MRI. PloS one, 11(8), e0160781.

Kahl KG, et al. (2015) Adrenal gland volume, intra-abdominal and pericardial adipose tissue in major depressive disorder. Psychoneuroendocrinology, 58, 1.

Ehling J, et al. (2014) Micro-CT imaging of tumor angiogenesis: quantitative measures describing micromorphology and vascularization. The American journal of pathology, 184(2), 431.