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Medical Imaging Solutions

An Advanced Medical Imaging
Research and Applications
Development Company...



Cost Effective Software Solutions for Diagnostic Imaging


Medical Imaging Solutions specializes in developing innovative, custom software solutions for biomedical, diagnostic imaging and clinical projects.

Our technical expertise include development of Automated and semi-automated image analysis and Visualization tool kits, advanced post processing applications for multi-modality, multi-dimensional images, Computer Aided Diagnosis (CAD) applications.

Our goal is to provide high quality, cost effective solutions to industry and research institutions with a focus on long term customer satisfaction.

Medical Imaging Solutions is based in Rochester MN.

SERVICES

- ▶ Development of Imaging Biomarkers to track Disease Progression.
 - ▶ Custom design and development of medical imaging algorithms.
 - ▶ Automated and semi-automated quantitative Image analysis tool kits.
 - ▶ DICOM tool kits
 - ▶ Multi modality, multi-dimensional image analysis and visualization applications
 - ▶ Automatic Image Segmentation, Image Fusion applications.
 - ▶ Custom Image processing modules integrated into existing applications .
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- ▶ Computer Aided Diagnosis (CAD) applications.
 - ▶ Application development using advanced open-source Image processing and Visualization tool kits.
 - ▶ Imaging Research and feasibility applications

EXPERIENCE

Medical imaging solutions was founded in the year 2000, with a goal to provide high quality solutions, customized to the unique diagnostic and clinical imaging needs. Our team consists of highly motivated and trained professionals. We will work closely with you from start to finish of a project.

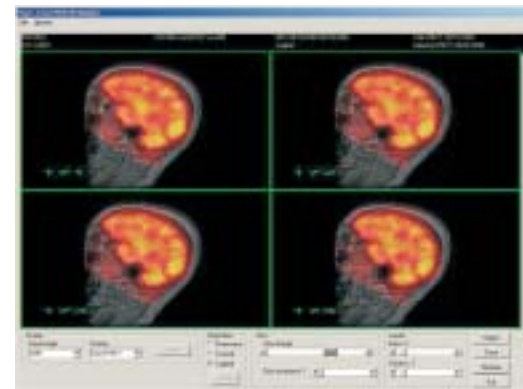
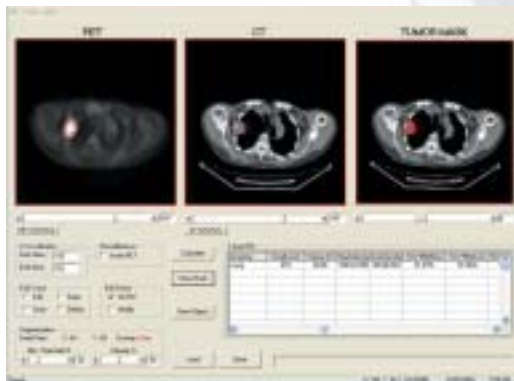
Our range of earlier projects include

Neuro-Imaging

- ★ Imaging Bio-markers for Alzheimer's disease patients
- ★ Automatic classification of Multiple Sclerosis lesions
- ★ Epileptic Seizure Diagnostic application
- ★ White matter disease quantification
- ★ Atlas Registration

Nuclear Medicine

- ★ Visualization and quantification of Gastric Accommodation
- ★ Tumor extraction and quantification from PET images, Fusion on to CT images, saving to multiple formats including Radiation Therapy Structure Set (DICOM-RTSS)



Clinical Radiology

- ★ An application to visualize, navigate, process and analyze the multi-modality multi-dimensional medical images
- ★ Automatic Contrast and Brightness adjustment Algorithm of clinical MR images
- ★ Automated quantitative analysis for clinical Film digitizer quality control applications
- ★ Automatic ACR image analysis software application

Cardiovascular

- ★ Left ventricular volume measurement from gated blood pool SPECT images
- ★ 3-D image analysis of coronary vascular networks obtained with micro-computed tomography

Microscopy imaging

- ★ Optical Sectioning Microscopy analysis of micro vascular networks.
- ★ Shape-based classification of red blood cells in normal and in disease states



Our Software Skills

Our Development Team's focus on the following skill-sets

- ❖ C++ / VC++
- ❖ Visual Basic / COM / DCOM / ASP/ MTS / XML
- ❖ Java / JDBC / Servlets / RMI / CORBA / JSP /EJB / XML / TCL / TK
- ❖ Oracle / SQL Server / MS Access / Mysql
- ❖ Windows NT / Unix / NetWare

PRODUCTS

Volume Visualization and navigation tool (VVNT)

A platform to visualize, navigate, process and analyze the multi-modality multi-dimensional medical images.

Advanced Image processing functions from the Insight Registration and Segmentation tool kit (ITK), Volume visualization functionality from the Visualization tool kit (VTK) are seamlessly integrated into this application. It is built as a Multi-Document Interface (MDI) application, so that several windows can be opened, several operations compared.

Some of the current features are,

- ❖ Opens all formats of the DICOM and raw data
- ❖ Performs basic image processing functions, contrast brightness adjustments, zooming, panning cine, multi-layout options
- ❖ Surface rendering and Maximum Intensity Projections
- ❖ Rotate the rendered and original volumes by specified direction and angle
- ❖ Automatic segmentation / object extraction
- ❖ Voxel counts and statistics

Several processing analysis functions are currently being added.

This version is available for download as a freeware.

PROFILE

Ramesh Avula Ph.D

Founder and President

Dr. Avula has a doctorate degree in Biomedical Engineering and has over 14 years of research and development experience in medical imaging. He worked on medical imaging projects at the Bioengineering department, Pennsylvania State University PA. He was involved in developing Image processing algorithms and software to process multi-dimensional radiology images at the Diagnostic Radiology dept. Mayo Clinic, Rochester MN. He is the founder of Medical Imaging Solutions based in Rochester MN. He is a member of RSNA (Radiological Society of North America), IEEE (Institute of Electrical and Electronic Engineers Association)

Srini V.R.Kollu Ph.D.

Chief Consultant, Head of Software Development

Dr. Srini VR has a doctorate degree in Biomedical Engineering with Electronics and communication engineering background. He worked with Indian Collaborator of ATL (Advanced Technological Laboratories), USA and developed two models of diagnostic ultrasound scanners. He has more than 15 years of development experience in the field of imaging technology and industrial automation. He is involved in the development of software products for scientific applications and firmware for instrumentation. Dr. Srini oversees the application development team for Medical Imaging Solutions.

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