MAGNETIC RESONANCE IMAGE SEARCH DATABASE SYSTEM USING ACTIVE SHAPE MODELING TECHNIQUE

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by

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LIST OF ABBREVIATIONS

2D	Two-Dimensional
3D	Three-Dimensional
CT	Computer Tomography
GUI	Graphical User Interface
MR	Magnetic Resonance
MRI	Magnetic Resonance Imaging
f-MRI	functional Magnetic Resonance Imaging
LZW	Lempel-Ziv-Welch Compression
MRS	Magnetic Resonance Spectroscopy
ROI	Region Of Interest

ABSTRACT

Image processing has gained popularity in the medical field as there are many illnesses which requires X-rays, CT scans and Magnetic Resonance (MR) imaging in order to enable accurate diagnosis of diseases. Magnetic Resonance is one of the popularly known imaging techniques used to aid diagnosis. The images collected through Magnetic Resonance (MR) imaging technique require a database for efficient storage, search and retrieval.

Medical image indexing, storage, and retrieval based on image content is an important feature of image database systems. A shape based image search system can be used as a diagnostic decision support tool and as a tool for medical research and development. This thesis examines an algorithm that can model the shape of the objects in the region of interest in the given MR images that are stored in a database, for efficient retrieval. The findings of this study suggest that modeled images linked with database can aid in accurate diagnosis and treatment of patients.