

Faster & Clearer MRI scans through a reconstruction software module

A software reconstruction layer designed to support faster, high-quality MRI imaging without the training bottleneck of fully sampled ground-truth datasets.

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Inventor information

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Proposed Uses

The technology is proposed as a software reconstruction module for MRI OEMs, scanner platforms, radiology AI workflows and advanced imaging centres.

It is designed to support faster brain and cardiac MRI reconstruction using existing MRI data and scanner infrastructure. Additional pathways include premium cardiac imaging and time-resolved / dynamic MRI workflows where image quality over time is commercially valuable.

Problem Addressed

MRI providers face a capacity problem: scan slots are limited, advanced protocols can be slow, and patient motion can lead to repeat imaging. Hospitals and imaging centres need ways to increase throughput without compromising image quality or investing in new scanner hardware.

MRI vendors are also competing to offer premium AI reconstruction features as software upgrades across installed systems. The global MRI systems market is forecast to reach around US\$9bn by 2030, while the AI-in-MRI market is forecast to grow strongly over the same period, creating a clear software-enabled upgrade opportunity.

The commercial meaning is simple: the monetisation gate is not just image quality, but repeatable deployment across real MRI workflows, with clear value for OEMs, hospitals and imaging centres.

Technology Overview

The technology is a software-based MRI reconstruction approach designed to convert undersampled multi-coil MRI data into high-quality images. It is intended to support faster imaging workflows by reducing the amount of data needed during acquisition, while preserving consistency with the scanner measurements.

Unlike many AI reconstruction tools that depend on large fully sampled training datasets, this approach is designed to work from incomplete MRI data. This may reduce a major deployment barrier for OEMs and imaging providers that want scalable AI reconstruction across different scanners, protocols and patient groups.

The current evidence base is strongest for brain and cardiac MRI reconstruction. The premium dynamic extension targets time-resolved and dynamic MRI, where maintaining image quality across time could support cardiac, motion-sensitive and advanced functional imaging workflows.

Inventor Information

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Benefits

Cost & Efficiency

- Reduces dependence on fully sampled training datasets.
- Supports faster MRI workflows and scanner utilisation.

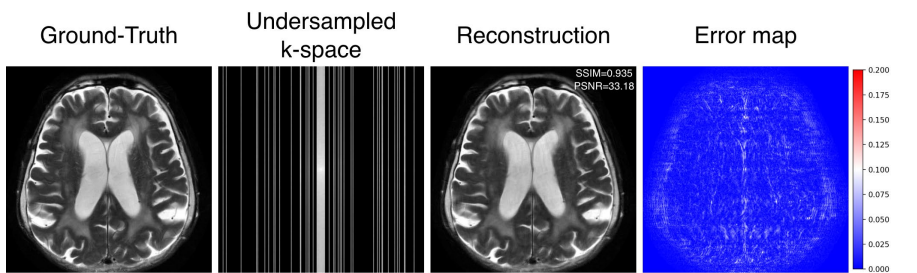
Performance & Sensitivity

- Designed for high-acceleration static and dynamic multi-coil reconstruction.
- Supports brain and cardiac image fidelity examples.

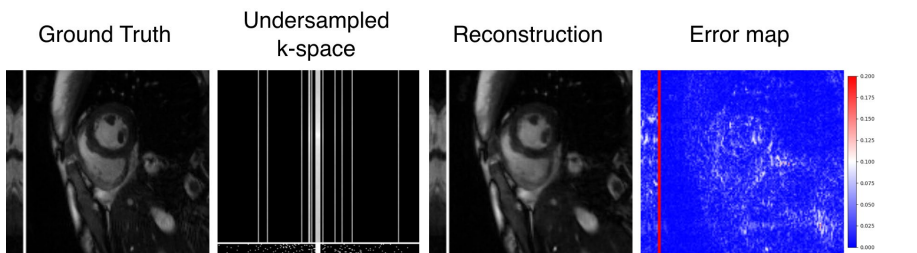
Versatility & Applications

- Fits OEM software upgrade and licensing pathways.
- Creates premium pathway for dynamic cardiac MRI.

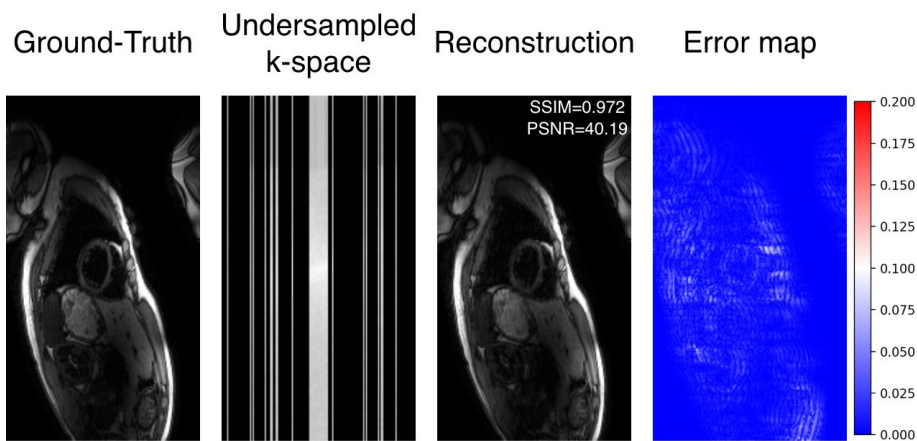
Additional Information



Brain MRI sample



Cine MRI sample



CMR (Cardiac Magnetic Resonance) MRI sample