Xiang Zhang

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🎓 Education

University of Electronic Science and Technology of China   2022 – Present

Master of Engineering in Control Science and Engineering, expected July 2025

University of Electronic Science and Technology of China   2018 – 2022

Bachelor of Engineering in Measurement and Control Technology and Instrument

📄 Publication

Sparse-view CT Reconstruction via Attention-based Parallel Dual-domain Fusion   Aug. 2024

Code, Writing   SUBMITTED

The study presents a dual-domain reconstruction network for Sparse-View Computed Tomography (SVCT) that uses parallel branches for sinogram and image domains, enhanced by a global attention module. This approach minimizes error propagation and utilizes the complementary strengths of both branches. A lightweight CNN and Transformer module in the sinogram branch recovers missing projection views. The network demonstrates high performance in SVCT reconstruction, effectively reducing noise while preserving details, and is validated on a Mayo Clinic benchmark dataset.

👥 Experience

Motion Compensation Using Deep Reinforcement Learning   Jan. 2024 – Present

C#, Python, Unity ML Agents, RL, sim2real

[Tencent Internship] RF Signal Generation and Acquisition System   Mar. 2024 – Jun. 2024

C, Python, Signal processing, RFSoC

Surgical Navigation and Teleoperation for Robot-Assisted Spine Surgery   Nov. 2022 – Present

C++, Python, ROS, OpenCV, NumPy, manipulator

Force Feedback Immersive Remote Ultrasound Diagnosis Technology   Nov. 2021 – Present

C++, Python, VR, OpenCV, Eigen, manipulator

[Contest] Implement Robotic Palletizer with AGV   Nov. 2020 – Sept. 2021

C++, OpenCV, navigation system, AGV, palletizer

[Contest] Automatic Rugby Robots   Oct. 2019 – Oct. 2020

C/C++, OpenCV, ROS, map building, LiDAR

⚙ Skills

- Programming Languages: C++, Python, LaTeX
- Platform: Linux, FreeRTOS
- Development: PyTorch, ROS, OpenCV, Docker, CMake, Git

♡ Honors and Awards

- 2nd *Prize*, China University Robot Competition   Oct. 2020
- 2nd *Prize*, China University Engineering Practice and Innovation Ability Competition   Sept. 2021
- 2nd *Prize*, China Postgraduate Mathematical Contest in Modeling   Oct. 2022