RICHARD(HUI) LI

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EDUCATION

University of California, Irvine, CA — Sept. 2023 - Expected June 2025
Master of Science in Computer Science

Huazhong University of Science and Technology, Wuhan, China — Sept. 2019 - June 2023
Bachelor of Engineering in Computer Science and Technology
GPA 3.98/4.0 (**top 2%**)

SKILLS

Programming Languages	Java, Python, C, JavaScript, Verilog, Assembly
Frameworks & Databases & Tools	Pytorch, MySQL, ROS, Git, Shell

EXPERIENCE

Research Intern — June - Oct. 2022
OPTML Group, Michigan State University — *East Lansing, MI*

- Proposed Smoothed Unrolling (SMUG) that systematically integrates Randomized Smoothing (RS) with the state-of-the-art model MoDL to mitigate its lack of robustness in MRI reconstruction
- Proposed a 'pre-training + fine-tuning' scheme and a novel unrolling loss to improve training effectiveness and efficiency of SMUG
- Developed SMUG in **Python** using **Pytorch** and improved the peak signal-to-noise ratio (PSNR) of MRI reconstruction by **3.1, 7.2 and 1.9 dB** on three types of robustness
- Published in ICASSP 2023 (Poster)

PROJECTS

RoboMaster — Sept. - Oct. 2022

- Implemented D* lite algorithm in **Python** for robot navigation
- Developed a robot-host communication system using **Robot Operating System (ROS)** and **Python**
- Utilized infrared sensor and camera on the robot to achieve autopilot in an indoor playground

Jigsaw Puzzle Game Website — Oct. - Dec. 2021

- Developed a online jigsaw game on HTML canvas using **JavaScript** with **Paper.js** graphics framework
- Implemented jigsaw tile segmentation, 'pick-drag-release' movement and assembly
- Adapted to different browsers and drag operations on PC and mobile devices
- Provided four types of hints, including image showing, border-only showing, tile flashing and relocating
- Proposed a novel magnet mode for fun-seeking users

File Search Engine — Mar. - May 2021

- Developed an offline text search engine in **Java** with cached inverted index
- Achieved stop-word filtering, multi-keywords searching, results scoring and ranking

HONORS & AWARDS

- PRC National Scholarship — Dec. 2020
- HUST Outstanding Graduate — June 2023