Zining Wang

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Education

Northeastern University Sep 2024 – Present
- MS in Electrical and Computer Engineering and PhD in Computer Engineering
- Advisor: Prof. Xuan Zhang

University of Michigan - Shanghai Jiao Tong University Joint Institute Sep 2020 – Aug 2024
- Bachelor of Engineering in Electrical and Computer Engineering
- Minor in Computer Science and Data Science

University of Wisconsin - Madison Jan 2023 – May 2023
- Exchange Student

Publications

Zining Wang, Jian Gao, Weidong Cao, Zhenge Jia, Yiyu Shi, Xuan Zhang. QC-CNN: Highly Quantized Compressive CNN for Efficient Ventricular Arrhythmia Detection in Implantable Cardioverter Defibrillators. ISCAS, 2025

Shikai Wang, Qiufeng Li,Houbo He, Jian Gao, **Zining Wang**, Yu Sun, Xuan Zhang, Taiyun Chi, Weidong Cao. Multi-Agent Generative Synthesis for Analog/RF Circuit: from Scalable Topology Generation to Efficient Inverse Design. ICCAD, 2025.

Research Experiences

Emerging Computing Technology Laboratory May 2023 - Dec 2023
- Assisted in developing High-Level Synthesis software to compile C and C++ to Verilog based on Clang, developed scripts to collect data, and optimized some operations by detailed chaining
- Assisted with research on Approximate High-Level Synthesis, reproduced algorithms in papers, and compared their performance

Dynamic Scheduling and Simulation of Automated Guided Vehicle System Oct 2020 - Oct 2021
- Conducted a review of state-of-the-art AGV technologies in the logistics industry, focusing on task allocation and path planning algorithms to support system design.
- Proposed and implemented algorithmic improvements to the AGV system, including enhanced multi-task allocation, Dijkstra-based path planning with time-window constraints, and traffic congestion avoidance, improving system robustness and efficiency; also designed a user-friendly interface.

Engineering Projects

Car Detection System on Bicycles Sep 2023 - Dec 2023
- Designed an embedded car detection system for bicycles, enabling real-time vehicle detection, safety distance estimation, low-latency processing, and safety index feedback using multi-sensor data.
- Built the system with a binocular camera, gyroscope sensor, and audio alerting device, and optimized detection models and algorithms to balance accuracy and performance on Raspberry Pi; awarded Silver Award at the Winter Expo Capstone Design.

Sensor Fusion of LiDAR and Camera Sep 2021 - Aug 2022
- Core member of the Computer Vision team responsible for LiDAR-based perception, integrating LiDAR and camera data for environment scanning, mapping, and accurate multi-robot localization using sensor fusion.
- Implemented a YOLO-based robot detection and friend-or-foe classification system by fusing visual and LiDAR data; the team won First Prize in the RoboMaster Robotics Competition, organized by DJI, in 2022.

Awards & Honors

Undergraduate Excellent Scholarship Dec 2023
Silver Award in Capstone Design Dec 2023
First Prize, the RoboMaster Robotics Competition Aug 2022
First Prize, National Olympiad in Informatics in Provinces Nov 2018

Skills

Computer: Linux (daily use since 2021), C/C++, Python, Rust
Language: Chinese (Native), English (Proficient)