Can He

hec2021@mail.sustech.edu.cn https://canhe173.github.io/

Education

Southern University of Science and Technology (SUSTech) Shenzhen, Guangdong
Master of Engineering, Electronics Science and Technology *Aug. 2021 – Jun. 2024*

- Advisor: Max Q.-H. Meng
- Accumulative GPA: 3.75/4.00
- Accumulative Score: 92.5/100
- RANK: 1/52

Southern University of Science and Technology (SUSTech) Shenzhen, Guangdong
Bachelor of Engineering (B.Eng.), Microelectronics Science and Engineering *Aug. 2017 – Jun. 2021*

- Accumulative GPA: 3.62/4.00
- Accumulative Score: 87.03/100
- RANK: 4/39

Research Experiences

Graduate Research, Prof. Max Q.-H. Meng & Prof. Jiankun Wang SUSTech
FabricFolding: Learning Efficient Fabric Folding without Expert Demonstrations

- Propose a system that efficiently implements the tasks of fabric unfolding and fabric folding with arbitrary initial configurations without expert demonstrations.
- Design a fabric unfolding strategy based on self-supervised learning, which combines dynamic and quasi-static actions to effectively unfold fabrics, even when partial sleeves of long-sleeved T-shirt are tucked inside the garment.
- Collect various types of real-world fabric images to create a keypoint detection dataset for fabric folding.

Undergraduate Research, Prof. Terry Tao Ye SUSTech
Convolution Computation Optimization Based on Karatsuba Algorithm *Sept. 2019 – Dec. 2020*

- Winograd, traditional convolution, karatsuba experimental verification using Verilog.
- Comparison and analysis of hardware resource consumption between karatsuba and winograd.

Publications & Preprints

$*$ indicates co-first authors

- **Can He**, Lingxiao Meng, Jiankun Wang, and Max Q-H. Meng. "FabricFolding: Learning Efficient Fabric Folding without Expert Demonstrations." *Under Review.* [Page] [Paper]
- Qi Wang*, Jianghan Zhu*, **Can He**, Shihang Wang, Xingbo Wang, and Terry Tao Ye. "Karatsuba Algorithm Revisited for 2D Convolution Computation Optimization." *Under Review.*
- Shihang Wang, Jianghan Zhu, Qi Wang, **Can He**, and Terry Tao Ye. "Customized instruction on risc-v for winograd-based convolution acceleration." *IEEE International Conference on Application-specific Systems, Architectures and Processors (ASAP).* [Paper]

Honors & Awards

2020	Third Prize	The Merit Student Scholarship for exceptional performance (SUSTech)
2018	Third Prize	The Merit Student Scholarship for exceptional performance (SUSTech)
2017	Excellence award	The freshman Scholarship (SUSTech)

Teachings

Teaching Assistant, Fundamental of Circuit (Fall 2020), Prof. Terry Tao Ye *Sept. 2020 – Jan. 2021*

Selected Academic Services

Conference Reviewing

- IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2023)
- International Conference on Biomimetic Intelligence and Robotics & Medical Robotics Forum (ICBIR & MRF 2023)
- International Symposium on Biomimetic Intelligence and Robotics & Orthopaedic Robotics Forum (ISBIR & ORF 2022)

Technical Skills

Programming Languages: Matlab $\geq$ Python > Verilog > C/C++
Robotic Manipulators: Kinova Gen3, Kinova Gen3 Lite, Franka Panda
Natural Languages: Mandarin Chinese, English
Developer Tools: Git, Docker, LaTeX, ROS
Operating Systems: Ubuntu, Window
Libraries: PyTorch, Opencv