

Zishuo Wang

Adaptive Computing Laboratory

School of Computing

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RESEARCH INTERESTS

My current research topics cover visual navigation, 2D & 3D perception, and autonomous system design. My research vision is to develop robust, generalisable visuomotor policy for robot navigation in the open world.

EDUCATION

National University of Singapore

Aug 2022 - Jun 2024

M.S. in Computing (AI specialisation), GPA: 4.67/5.0

Advisor: [Prof. David Hsu](#)

Harbin Institute of Technology

Aug 2018 - Jun 2022

B.E. in Automation and B.E. in Artificial Intelligence, GPA: 90.57/100

Advisor: [Prof. Huijun Gao](#)

EXPERIENCE

Adaptive Computing Laboratory, National University of Singapore

Jan 2023 – present

Research Assistant with [Prof. David Hsu](#)

Singapore

- Developed [Failure Resilience in Learned Visual Navigation Control](#)
- Developed [Open World GPS Goal Visual Navigation Approach](#)

Research Institute of Intelligent Control and Systems, Harbin Institute of Technology

Aug 2021 – Jun 2022

Undergraduate RA with [Prof. Huijun Gao](#)

Harbin, China

- Developed **Hatch Recognition Method for Bulk Carrier** with point cloud merging, learning-based 3D part segmentation and classical 2D image processing. Contributed to the perception module for automatic coal loading at Tianjin Port.

PUBLICATIONS

Preprints

- [1] Xuesu Xiao, Jie Tan, Michael Cho, David Hsu, Dhruv Shah, Joanne Truong, Ted Xiao, Naoki Yokoyama, Wenhao Yu, Tingnan Zhang, Zhuo Xu, Santiago Pravisani, Nireesh Dravin, Mohammad Alshamsi, Hyung-Suk Yoon, Ji-Sung Bae, E-In Son, Ji-Hoon Hwang, Dong-Wook Kim, Kun Park, Yeon-Kyu Lee, Jung-Tak Kim, Seung-Woo Seo, Joel Loo, **Zishuo Wang**, Nielsen Cugito, Yuwei Zeng, Tianle Shen, Arthur Zhang, Zichao Hu, Dongmyeong Lee, Taijing Chen, Michael Munje, Luisa Mao, Hochul Hwuang, Peter Stone, and Joydeep Biswas. "Autonomous Mario Kart in the Wild: Lessons Learned from The Earth Rover Challenge at IROS 2024" *In submission to Robotics and Automation Magazine (RAM), 2025.*

[\[Paper\]](#)

PROJECT

Anti-photographic Detection Algorithm with Semi-supervised Learning

Aug 2021 – Jun 2022

Undergraduate RA with Prof. Hongzhi Zhang

Center on Machine Learning Research, HIT

- Built an one-stage object detector for photographic equipment with pseudo-label based semi-supervised learning.

Table Curling Robot

Sep 2020 – Sep 2021

Project Lead; Advisor: Prof. Dandan Li

Nvidia A.I. & Control Research Center, HIT

- Built a smart robot car which can play curling on table by integrating visual processing, decision making and control.

Intelligent Vision PTZ for Face Tracking and Alerting

Nov 2019 – Nov 2020

Project Lead; Advisor: Prof. Jiawei Wang

Center for Experimental Flight Vehicle Control Education, HIT

- Built an 2-Dof Vision PTZ capable of face recognition and tracking.

Multi-legged Bionic Robot

Sep 2018 – Sep 2019

Project Lead; Advisor: Prof. Jiawei Wang

Center for Experimental Flight Vehicle Control Education, HIT

- Built a quadrupedal/hexapedal robot capable of obstacle avoidance and line following.

SELECTED AWARDS AND HONORS

- 2nd place in [The Earth Rover Challenge](#), IROS 2024 2024
- 8841 Impact Scholarship 2021
- First Prize in Curling AI Challenge 2021
- Merit Student 2021
- People's Scholarship 2019, 2020, 2021
- Excellent Student Leader 2019, 2020

SKILLS

- **Programming:** Python, C/C++, MATLAB
- **Software & Tools:** ROS, PyTorch, OpenCV, AutoCAD, Git, \LaTeX
- **Hardware:** Multiple Motors and Sensors, Arduino, Raspberry Pi, Nvidia Jetson, Basic Mechanical Design
- **Languages:** Chinese: Native. English: IELTS: 7, GRE: 326+3.5