

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.

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 system 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