Zishuo Wang

Adaptive Computing Laboratory

School of Computing

National University of Singapore, Singapore 117417

✉ zishuo.wang@u.nus.edu

⌂ zishuowang.com

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 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