CURRICULUM VITAE

Zheyu Zhuang

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A PhD graduate in robotics from the Australian National University with over four years of experience deploying novel learning-based visual manipulation algorithms for real-world robots. Equipped with a wide range of essential skills for modern manipulation research, including but not limited to control problem formulation, setup of simulated and real-world environments, data collection, deep learning, computer vision, real-world deployment, and human-robot collaboration system integration.

EDUCATION

PhD*, Robotics
The Australian National University & The Australian Centre of Excellence for robotic Vision
Supervisor: Prof. Robert Mahony
* Completed oral defence, thesis currently undergoing external review; expected to graduate in November 2022.

2017 ~ 2022

BSc, Electronic and Communication & Mechatronics (Double Major)
First Class Honours, The Australian National University.

2013 ~ 2016

PUBLICATIONS

GoferBot: A Visual Guided Human-Robot Collaborative Assembly System
Zhuang, Z., Ben-Shabat, Y., Zhang ,J., Gould, S., and Mahony, R.,
IEEE International Conference on Intelligent Robots and Systems (IROS).

2022

End-to-end Multi-Instance Robotic Reaching from Monocular Vision
Zhuang, Z., Yu, X. and Mahony, R.,
IEEE International Conference on Robotics and Automation (ICRA).

2021

LyRN (Lyapunov Reaching Network): A Real-Time Closed Loop approach from Monocular Vision
Zhuang, Z., Yu, X. and Mahony, R.,
IEEE International Conference on Robotics and Automation (ICRA).

2020

Learning Real-time Closed Loop Robotic Reaching from Monocular Vision by Exploiting A Control Lyapunov Function Structure
Zhuang, Z., Leitner, J. and Mahony, R.,
IEEE International Conference on Intelligent Robots and Systems (IROS)

2019

Learning Innovations for State Estimation
Kennedy, G., Gao, J., **Zhuang, Z.**, Yu, X. and Mahony, R.,
IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS).

2021

Stereo Event-Frame Camera Dataset for 3D Perception
Wang, Z., Ng, Y., Pan, L., **Zhuang, Z.**, and Mahony, R.,
IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS).

2021

6DoF Object Pose Estimation via Differentiable Proxy Voting Loss
Yu, X., **Zhuang, Z.**, Koniusz, P. and Li, H.,
British Machine Vision Conference (BMVC)

2020

Cartman: The Low-cost Cartesian Manipulator That Won the Amazon Robotics Challenge
Morrison, D., Tow, A.W., Mctaggart, M., Smith, R., Kelly-Boxall, … **Zhuang, Z.**, Lehnert, C., Reid, I., Corke, P. and Leitner, J.
IEEE International Conference on Robotics and Automation (ICRA).

2018

Semantic Segmentation from Limited Training Data
Milan, A., Pham, T., Vijay K., Morrison, D., Tow A., Liu L., …, **Zhuang**, Z., Lehnert, C., Lin, G., Reid, I., Corke, P. and Leitner, J.,
IEEE International Conference on Robotics and Automation (ICRA).

2018

TUTORING & TEACHING

Workshop Designer & Head Tutor
<u>Robotic Vision Summer School</u>
Design and develop a workshop series that integrates SLAM and learning-based object detection into real-world robots. Parts of the workshop content have been incorporated into the Intelligent Robotic Course (ECE4078) at Monash University.

2020 & 2021

Tutor
System Engineering, Robotics, Computer Vision (Undergraduate & Graduate)
Deliver tutorials over specific course materials, demonstrate lab content and facilitate students' understanding of course content.

2017 ~ 2021

Guest Lecturer
ANU CECS Summer School
Deliver a guest lecture regarding artificial intelligence in warehouse automation.

2018

AWARDS

The Best Team Project
Australian Centre of Excellence for Robotic Vision Annual Symposium

2020

The Best Technical Demo
Australian Centre of Excellence for Robotic Vision Annual Symposium

2019

The First Place (as a member of Team ACRV)
Amazon Robotic Challenge 2017

2017

Latest Update: July 2022