ZHIJIE YANG

(+49) 152 0834 0657 ⋄ zhijie.yang1@outlook.com ⋄ zhijie.yang@tum.de

EDUCATION

Technical University of Munich	October 2020 - Present
M.Sc. in Computer Science (Informatik)	
Department of Informatics (Fakultät für Informatik)	Grade: 2.0
ShanghaiTech University	August 2017 - July 2020
B.Eng. in Computer Science and Technology	
School of Information Science and Technology	
ShanghaiTech University	August 2016 - July 2017
B.S. in Bioscience	
School of Life Science and Technology	

RESEARCH PROJECTS

Towards Generation and Evaluation of Comprehensive Mapping Robot Datasets[1][2]
This project consists of building an autonomous robot system with various heterogeneous sensors to precept the surroundings and generating datasets for SLAM algorithm benchmarks and experiments. Supervisor: Prof. Dr. Sören Schwertfeger [i].

Mapping with Reflection – Detection and Utilization of Reflection in 3D Lidar Scans[4]
This project aimed at detecting the reflecting surfaces with 3D Lidar and used it to map the backside of objects. Supervisor: Prof. Dr. Sören Schwertfeger [i].

3D Object Detection with a Self-supervised Lidar Scene Flow Backbone[3]
Advisor: Emec Ercelik M.Sc. [ii]; Supervisor: Prof. Dr.-Ing. Alois Knoll. [iii]

Self-supervised Backbone Training
Advisor: Emec Ercelik M.Sc. [ii], Dr. Ekim Yurtsever [iv]; Supervisor: Prof. Dr.-Ing. Alois Knoll. [iii]

Transformer-based Point Cloud Semantic Segmentation
Supervisor: Prof. Dr. Matthias Nießner. [v]

TECHNICAL STRENGTHS

Modeling and Analysis: SOLIDWORKS
Programming Languages: C, C++, Python, MATLAB, RISC-V and Heidenhain
Machine Learning Tools: PyTorch, PyTorch Lightning, NumPy, SciPy, TensorFlow
Systems: Robot Operating System (ROS) and Linux

WORK EXPERIENCE

School of Information Science and Technology	
Research assistant	August 2020 - January 2021
Teaching assistant for Computer Architecture I	January 2019 - June 2019

Teaching assistant for Operating System I	September 2019 - January 2020
Teaching assistant for Intro. to Information Science and Technology B	February 2020 - July 2020

Stereye Co., Ltd.   April 2019 - January 2021
Internship as R&D engineer for sensor drivers in ROS (Python and C++).

SenseTime   March 2021 - September 2021
Autonomous driving system research intern. DevOps (Dev: Python and C++; Ops: Docker, Jenkins, etc.) for ROS-based test platform middle-ware.

Shanghai AI Lab   September 2021 - May 2022
Computer vision research intern for dataset evaluation.

AWARDS

RoboCup Rescue China
· The third prize.   April 2018
· The first prize.   April 2019

Challenge Cup Shanghai Final
· The first prize.   May 2019

Merit Student of Academic Year 2017-2018   November 2018
Merit Student of Academic Year 2018-2019   November 2019

SERVICES

Shanghai Metro Volunteer   Since September 2014
· more than 400 hours service time.

LANGUAGES

Chinese Mandarin   Native Speaker
English   Proficient Speaker
· TOEFL: 102, Reading 27, Listening 28, Speaking 23, Writing 24   as of June 2019
· GRE: 322, Verbal 155, Quantitative 167, Writing 3.5   as of November 2019

German   A2

Publications

[1] Hongyu Chen et al. "Advanced mapping robot and high-resolution dataset". In: *Robotics and Autonomous Systems* (2020), p. 103559. ISSN: 0921-8890. DOI: https://doi.org/10.1016/j.robot.2020.103559. URL: http://www.sciencedirect.com/science/article/pii/S0921889020303997.

[2] Hongyu Chen et al. *Towards Generation and Evaluation of Comprehensive Mapping Robot Datasets*. In Workshop on Dataset Generation and Benchmarking of SLAM Algorithms for Robotics and VR/AR, 2019 IEEE International Conference on Robotics and Automation (ICRA). 2019. arXiv: 1905.09483 [cs.RO]. URL: https://arxiv.org/abs/1905.09483.

[3] Emeç Erçelik et al. "3D Object Detection with a Self-supervised Lidar Scene Flow Backbone". In: *arXiv preprint arXiv:2205.00705* (2022). Accepted as an oral paper in ECCV 2022.

[4] Xiting Zhao, Zhijie Yang, and Sören Schwertfeger. "Mapping with Reflection - Detection and Utilization of Reflection in 3D Lidar Scans". In: *2020 IEEE International Symposium on Safety, Security, and Rescue Robotics (SSRR)*. 2020, pp. 27–33. DOI: 10.1109/SSRR50563.2020.9292595.