

Guangyao Zhai

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Education

- **Zhejiang University** *Hangzhou · China* Sep. 2018 – Mar. 2021
Master's Degree in Control Science and Engineering
– Affiliated with State Key Laboratory of Industrial Control Technology
- **Northwestern Polytechnical University** *Xi'an · China* Sep. 2014 – Jun. 2018
Bachelor's Degree in Automation, **Academic Record Percentage: 87/100, GPA: 3.57/4.00**

Skills

- **Programming:** Python, C++, MATLAB, L^AT_EX
- **Framework:** Robot Operating System (ROS), PyTorch

Publication

- **Journal**
 - *Guangyao Zhai, Liang Liu, Linjian Zhang and Yong Liu. PoseConvGRU: A Monocular Approach for Visual Ego-motion Estimation by Learning. Pattern Recognition (2020) [\[link\]](#)*
- **Conference**
 - *Xin Kong, Xuemeng Yang, Guangyao Zhai and Yong Liu et.al. Semantic Graph Based Place Recognition for 3D Point Clouds. IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2020) [\[link\]](#)*
 - *Xin Kong, Guangyao Zhai, Baoquan Zhong and Yong Liu. PASS3D: Precise and Accelerated Semantic Segmentation for 3D Point Cloud. IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2019) [\[link\]](#)*
 - *Liang Liu, Guangyao Zhai, Wenlong Ye and Yong Liu. Unsupervised Learning of Scene Flow Estimation Fusing with Local Rigidity. the Twenty-Eighth International Joint Conference on Artificial Intelligence (IJCAI 2019) [\[link\]](#)*
- **Preprint**
 - *Guangyao Zhai, Yong Liu et.al., FlowMOT: 3D Multi-Object Tracking by Scene Flow Association. Submitted to IROS 2021 [\[link\]](#)*

Project

- **Research on the Perception and Decision of Legged Robots** May. 2019 – May. 2020
Collaborated with: **DeepRobotics Co. Ltd.**
 - **Introduction:** I am cooperating with DeepRobotics to research the perception ability of legged robots. The main task is to achieve 3D real-time obstacle avoidance tracking for an interested moving target (SOT). The overall project is based on the ROS framework and is divided into four modules: Global Map Relocalization, Walkable Area Detection, 3D Single Object Tracking, Path Planning and Navigation.
 - **Responsibilities:** I am the **project leader**, researching and making the module of Walkable Area Detection and Object Tracking in the project. I am also responsible for writing project materials, coordinating the progress of other project fellow and connecting with other relevant fellow.

Internship Experience

- **Huawei Technologies Co. Ltd.** *Shanghai · China* Apr. 2020 – Aug. 2020
Research Intern / **Noah's Ark Laboratory, 2012 Laboratories**
 - Have designed a 3D Multi-Object Tracking framework based on LiDAR point cloud.

Awards and Honors

- **Awards**

- **National Scholarship for Postgraduates** *Ministry of Education of the P. R. China* 2019 – 2020
(*The highest prize for postgraduates in China's Mainland*)
- **Academic Scholarship** *Zhejiang University* 2018 – 2019
- **Second Prize Scholarship × 3** *Northwestern Polytechnical University* 2014 – 2017

- **Honors**

- **“Triple-A” Master Student** *Zhejiang University* 2019 – 2020
(*Top 15% master students*)
- **Outstanding Master Student** *Zhejiang University* 2019 – 2020
(*Top 35% master students*)

Additional Information

- **Review Experience**

- International Conference on Robotics and Automation (ICRA)
- International Conference on Intelligent Robots and Systems (IROS)
- International Conference on Climbing and Walking Robots and the Support Technologies for Mobile Machines (CLAWAR)

- **Language Skills**

- Mandarin *native*
- English *IELTS 6.5 (Listening: 6.5 Reading: 7 Speaking: 6.5 Writing: 6.5)*

- **Interests**

- Passionate about swimming (practicing for five years), fitness and cooking.

- **Values and Methodology**

- *Quality · Diligence · Self-reflection*