Guangyao Zhai

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Education

- **Zhejiang University** *Hangzhou · China* Sep. 2018 – Jun. 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

Skills

- **Programming**: Python, C++, MATLAB, LaTeX
- **Framwork**: 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 IEEE Robotics and Automation Letters** [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.

Work 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**
  - IEEE Robotics and Automation Letters (RA-L)
  - 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*