Xiao(Barry) Liang

✉ barryliang521@gmail.com 📞 +81 07010769166 📖 2-2-1 Aomi, Koto city, Tokyo 🔗 https://barry-liang.github.io/resume/

SUMMARY	**Seeking for a Job related to Robotics, Algorithm or Computer Vision Engineer** ● Skilled in C++, Python, MATLAB, ROS and OpenCV. (★★★★) ● Familiar with Linux, PyTorch, Shell, Webots and Universe Robot (★★★) ● Experienced in Blender, Cuda, OpenMP, and V-REP Pro. (★★) ● Fluent in English and beginner level in Japanese. ● Interdisciplinary engineer, fully trained project experience with leadership, nice group worker
EDUCATION	**The University of Tokyo (UT)**, Tokyo, Japan *Member of Yamakawa Lab. (High Speed Flexible Robotics Lab)* M.S. in Mechanical Engineering (English Program) *Sept 2019 – Aug 2021 (expected)* **Shanghai Jiao Tong University（SJTU）**, Shanghai, China *University of Michigan – Shanghai Jiao Tong University Joint Institute (UM-SJTU JI)* B.Sc. in Mechanical Engineering (English Program) *Sept 2015 – Aug 2019* Overall GPA: 3.77/4.00; Major GPA: 3.93/4.00 (ranking 2/58).
INTERNSHIP	**Computer Vision Engineer**, Huawei Tokyo Research Center, Tokyo, Japan *Oct 2020 -present*
COURSES HIGHLIGHTS	Deep learning, Machine learning, Robot Manipulation, Data Science and Machine Leaning, Linear Algebra, Automatic Control, Intro to Robotics, Data Structure and Algorithms
RESEARCH EXPERIENCE	**Dual Arm Cooperation Control of Diabolo Robot based on Real-Time Visual Feedback** *Yamakawa Laboratory (High Speed Flexible Robotics Lab) @UT Dec 2020 –present* • Apply visual feedback to measure the 6D pose of diabolo in real time. • Achieve basic spinning balance of the diabolo using dual-arm control **Tracking and Catching of a Thrown Ring** *Yamakawa Laboratory (High Speed Flexible Robotics Lab) @UT June 2020 – Dec 2020* • Proposed a marker-based 6D pose tracking algorithm using a high-speed vision system. • Designed a catching point selection algorithm to make the robot accomplish high-speed catching **Design and Analysis of a Wheel-Leg Hybrid Robot with Novel Transformation Mechanism** *Laboratory of Smart Solids and Structures @SJTU June 2018 – Sept 2018* • Designed a vehicle robot with actively transformed three-leg wheels • Conducted automatic control of wheel-transformation to pass through sand road and smooth road
SELECTED PROJECTS	**CCD Camera Imaging (Silver Award)** *VM450 Capstone Design @SJTU Sept 2018 – Dec 2018* • Designed a software-based optical imaging model to analog CCD camera imaging system • Compared small hole imaging and lens imaging and conducted feasibility analysis **Motion Planning of Robot MORO: Roaming Obstacle Avoidance and Chassis Path Planning** *VM467 Introduction to Robotics @SJTU June 2018 – Aug 2018* •Utilized the sensor system and SLAM algorithm to plan the path and control the movement •Applied and compared the A star and Dijkstra algorithm in shortest path planning **A Spinning Bike-based Air Purification Device** *VG100 Introduction to Engineering @SJTU June 2016 – Aug 2016* • Designed and manufactured an exercise bike with belt transmission • Designed and installed an air purification shell to pump out air through the filtration system
TUTOR EXPERIENCE	**Undergraduate Education Office, UM-SJTU JI** *Teaching Assistant @SJTU Sept 2018 – Aug 2019* • Worked as TA for one major course: VM395 Laboratory I **Academic Advising Center, UM-SJTU JI** *Student Advisor @SJTU Sept 2017 – Aug 2019* • Provide academic advice to JI students • Hold workshops aiming to promote academic skills and share professional interests
SELECTED HONORS	The Japanese Government's MEXT scholarship *Sept 2019- Aug 2021* Shanghai Distinguished Graduates Award *June 2019* National Scholarship (Twice, top 1% in SJTU) *Oct 2017, Oct 2018* Honorable Mention in Mathematical Contest in Modeling *Apr 2018* Yu Liming Scholarship (Twice, top 5% in UM-SJTU JI) *Nov 2016, Nov 2017* Undergraduate Excellent Scholarship (3 times, top 3% in SJTU) *Dec 2016, Dec 2017, Dec 2018*