

Xiao(Barry) Liang

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🔗 <https://barry-liang.github.io>

SUMMARY	Seeking for a summer internship in 2020 (prefer online work) <ul style="list-style-type: none">● Skilled in C++/C, Python, Matlab, ROS and OpenCV. (★★★★)● Familiar with Linux, Pytorch, Latex, CAD, Arduino, Webots and Universe Robot (★★★)● Experienced in Cuda, OpenMP, Tensorflow and V-REP Pro. (★★)● Fluent in English and intermediate level in Japanese.● Interdisciplinary engineer, fully trained project experience with leadership, fast learner and nice group worker.		
EDUCATION	The University of Tokyo (UT) , Tokyo, Japan <i>Member of Yamakawa Lab. (High Speed Flexible Robotics Lab)</i> M.S. in Mechanical Engineering (English Program) <i>Sept 2019 – Aug 2021 (expected)</i> Shanghai Jiao Tong University (SJTU) , Shanghai, China <i>University of Michigan – Shanghai Jiao Tong University Joint Institute (UM-SJTU JI)</i> B.Sc. in Mechanical Engineering (English Program) <i>Sept 2015 – Aug 2019</i> Overall GPA: 3.77/4.00; Major GPA: 3.93/4.00 (ranking 2/58).		
COURSES	Coursera: Deep learning, Machine learning		
HIGHLIGHTS	UT: Robot Manipulation, Visual Media Engineering, System and Control Theory SJTU: Dynamics and Vibrations, Linear Algebra, Automatic Control, Robotics		
RESEARCH EXPERIENCE	Control of Dual-Arm Diabolo Robot based on Flexible Manipulation and Visual Feedback <i>Yamakawa Laboratory (High Speed Flexible Robotics Lab)</i> @UT <i>June 2020 – present</i> <ul style="list-style-type: none">• Apply visual feedback to measure the 6D pose of diabolo in real time.• achieve basic spinning balance and tosses of the diabolo using dual-arm control Design and Analysis of a Wheel-Leg Hybrid Robot with Novel Transformation Mechanism <i>Laboratory of Smart Solids and Structures</i> @SJTU <i>June 2018 – Sept 2018</i> <ul style="list-style-type: none">• 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	Recognition and Catching of a Thrown Ring using High-Speed Vision <i>Robomech Conference</i> @Japan <i>Feb 2020 – May 2020</i> <ul style="list-style-type: none">• Proposed a marker-based binocular pose estimation method in real time• Implemented a self-adjustable control strategy to catch a ring object. CCD Camera Imaging based on Monte-Carlo Algorithm (Silver Award) <i>VM450 Capstone Design</i> @SJTU <i>Sept 2018 – Dec 2018</i> <ul style="list-style-type: none">• 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 <i>VM467 Introduction to Robotics</i> @SJTU <i>June 2018 – Aug 2018</i> <ul style="list-style-type: none">• 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 <i>VG100 Introduction to Engineering</i> @SJTU <i>June 2016 – Aug 2016</i> <ul style="list-style-type: none">• 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 <i>Teaching Assistant</i> @SJTU <i>Sept 2018 – Aug 2019</i> <ul style="list-style-type: none">• Worked as TA for one major course: VM395 Laboratory I Academic Advising Center, UM-SJTU JI <i>Student Advisor</i> @SJTU <i>Sept 2017 – Aug 2019</i> <ul style="list-style-type: none">• 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 <i>Sept 2019- Aug 2021</i> Shanghai Distinguished Graduates Award <i>June 2019</i> National Scholarship (Twice, top 1% in SJTU) <i>Oct 2017, Oct 2018</i> Honorable Mention in Mathematical Contest in Modeling <i>Apr 2018</i> Yu Liming Scholarship (Twice, top 0.5% in UM-SJTU JI) <i>Nov 2016, Nov 2017</i> Undergraduate Excellent Scholarship (3 times, top 5% in SJTU) <i>Dec 2016, Dec 2017, Dec 2018</i>		