

# 梁笑

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教育背景	东京大学 工学硕士 (英文项目): 山川研究室 (高速机器人实验室) GPA: 4.00/4.00 上海交通大学 交大密西根学院 工学学士 (英文项目): 主修机械工程 GPA: 3.77/4.00 (专业第二名) 专业 GPA: 3.93/4.00	东京, 日本 9 / 2019 – 9 / 2021 上海, 中国 9 / 2015 – 8 / 2019
实习经历	计算机视觉工程师 华为东京研究所 AR/VR 部门 1. 评估测试 3D 人脸重建的最新研究成果, 应用 Tencent 3D face, Ganfit, Avatarme 等现有模型重建 3D 人脸。 2. 进行人脸数据采集, 转换和 3dmm 基底构建。 3. 参与测试 Dressi 渲染器性能, 应用该渲染器进行贴图材质的优化。	东京, 日本 10 / 2020 – 7 / 2021
核心课程	深度学习, 机器人操作, 数据结构与算法, 数据科学和机器学习, 线性代数, 概率论, 自动控制, 多线程并行计算, 光线追踪与图像合成	
研究经历	东京大学 山川机器人研究室 <b>研究一: 基于高速双目视觉的高速旋转物体姿态测量和运动追踪。</b> 设计基于双目的标记物匹配算法和局部窗口追踪算法, 实现 1000hz 的高速视觉追踪和基于标记物排列模式的运动姿态估计。 <b>研究二: 飞行环的视觉追踪和机器人抓取</b> 应用高速视觉系统实现飞行环的视觉追踪和姿态估计。设计新的抓取点选择算法实现快速灵敏的机器人抓取动作。	东京, 日本 12 / 2020 – 现在 6 / 2020 – 12 / 2020
项目经历	上海交通大学 <b>项目一: CCD 相机成像模拟系统 (毕业设计银奖)</b> 设计基于 CCD 相机成像原理的光学仿真软件, 输入车灯发射的光线数据, 输出相机在不同角度和距离的成像结果。该项目用于车灯设计中的成像效果评测。 <b>项目二: 移动机器人运动规划: 底盘运动规划和避障</b> 利用传感器系统实现避障功能; 对比 A star 和 Dijkstra 等最短路径规划算法, 实现移动机器人到目标点的运动规划。 <b>项目三: 基于动感单车的空气净化系统</b> 设计并制造基于皮带传动的动感单车, 将车轮改造成空气净化系统, 利用锻炼时的车轮转动实现空气净化。用 Arduino 和传感器等实现心率测量, 车轮转速测量和信息显示等功能。	上海, 中国 9 / 2018 – 12 / 2018 6 / 2018 – 8 / 2018 6 / 2016 – 8 / 2016
课外活动/领导力	上海交大密西根学院 <b>课程助教</b> 9 / 2018 – 8 / 2019; <b>学业分享中心负责人</b> 9 / 2017 – 8 / 2019; 担任实验课助教, 每周开展英文实验讲解, 负责批改作业, 协助教授设计实验项目。 组织学业分享中心日常 workshop; 为学院同学提供课程, 科研等方面的咨询服务。 <b>学生会部长</b> 7 / 2016 – 7 / 2017; <b>密院青志队副队长</b> 7 / 2016 – 7 / 2017; 在学生组织企业参观和商业挑战赛活动。在青志队参与策划日常公益和年度支教活动。 大理右所实验小学 和 大理农业局 <b>支教老师</b> 12 / 2015 – 1 / 2016; <b>生态经济挑战赛成员</b> 12 / 2017 – 1 / 2018; 参与寒假支教活动, 为当地学生开展日常文化课教学和特色科普课程。 参加大理生态经济挑战赛, 为当地果农制定线上和线下销售方案。	上海, 中国 云南, 中国
荣誉	日本文部省奖学金 上海市优秀毕业生 国家奖学金 (两次) 美国大学生数学建模大赛荣誉奖 俞黎明奖学金 (两次) 交大学业优秀奖学金 (三次)	9 / 2019 – 8 / 2021 6 / 2019 10 / 2017, 10 / 2018 4 / 2018 11 / 2016, 11 / 2017 12 / 2016, 12 / 2017, 12 / 2018
技能/兴趣	技能: 编程 (C++, Python, MATLAB), CV/CG (OpenCV, Open3D, Blender), 机器学习/多线程 (Linux, PyTorch, Shell, Cuda, OpenMP), 机器人 (ROS, Arduino, UG, AutoCAD, V-REP Pro, Webots, UR 机械臂), 英语流利 (托福 100, GRE 324)	爱好: 唱歌, 长跑

# Xiao(Barry) Liang

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<b>SUMMARY</b>	<b>Seeking for a Job related to Robotics, Algorithm or Computer Vision Engineer</b> <ul style="list-style-type: none"><li>● Skilled in C++, Python, MATLAB, ROS and OpenCV. (★★★★)</li><li>● Familiar with Linux, PyTorch, Shell, Webots and Universe Robot (★★★★)</li><li>● Experienced in Blender, Cuda, OpenMP, and V-REP Pro. (★★)</li><li>● Fluent in English and beginner level in Japanese.</li><li>● Interdisciplinary engineer, fully trained project experience with leadership, nice group worker</li></ul>
<b>EDUCATION</b>	<b>The University of Tokyo (UT), Tokyo, Japan</b> <i>Member of Yamakawa Lab. (High Speed Flexible Robotics Lab)</i> M.S. in Mechanical Engineering (English Program) <i>Sept 2019 – Sept 2021(expected)</i> <b>Shanghai Jiao Tong University (SJTU), Shanghai, China</b> <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).
<b>INTERNSHIP</b>	<b>Computer Vision Engineer, Huawei Tokyo Research Center, Tokyo, Japan</b> <i>Oct 2020 – July 2021</i>
<b>COURSES</b>	Deep learning, Machine learning, Robot Manipulation, Data Science and Machine Learning,
<b>HIGHLIGHTS</b>	Linear Algebra, Automatic Control, Intro to Robotics, Data Structure and Algorithms
<b>RESEARCH EXPERIENCE</b>	<b>Marker-Based Pose Estimation for Rotating Objects using High-Speed Vision</b> <i>Yamakawa Laboratory (High Speed Flexible Robotics Lab) @UT Dec 2020 – present</i> <ul style="list-style-type: none"><li>• Apply visual feedback to measure the position and orientation of rotating objects in real time.</li><li>• Achieve a general marker-matching algorithm to avoid the marker labeling</li></ul> <b>Tracking and Catching of a Thrown Ring</b> <i>Yamakawa Laboratory (High Speed Flexible Robotics Lab) @UT June 2020 – Dec 2020</i> <ul style="list-style-type: none"><li>• Proposed a marker-based 6D pose tracking algorithm using a high-speed vision system.</li><li>• Designed a catching point selection algorithm to make the robot accomplish high-speed catching</li></ul> <b>Design and Analysis of a Wheel-Leg Hybrid Robot with Novel Transformation Mechanism</b> <i>Laboratory of Smart Solids and Structures @SJTU June 2018 – Sept 2018</i> <ul style="list-style-type: none"><li>• Designed a vehicle robot with actively transformed three-leg wheels</li><li>• Conducted automatic control of wheel-transformation to pass through sand road and smooth road</li></ul>
<b>SELECTED PROJECTS</b>	<b>CCD Camera Imaging (Silver Award)</b> <i>VM450 Capstone Design @SJTU Sept 2018 – Dec 2018</i> <ul style="list-style-type: none"><li>• Designed a software-based optical imaging model to analog CCD camera imaging system</li><li>• Compared small hole imaging and lens imaging and conducted feasibility analysis</li></ul> <b>Motion Planning of Robot MORO: Roaming Obstacle Avoidance and Chassis Path Planning</b> <i>VM467 Introduction to Robotics @SJTU June 2018 – Aug 2018</i> <ul style="list-style-type: none"><li>• Utilized the sensor system and SLAM algorithm to plan the path and control the movement</li><li>• Applied and compared the A star and Dijkstra algorithm in shortest path planning</li></ul> <b>A Spinning Bike-based Air Purification Device</b> <i>VG100 Introduction to Engineering @SJTU June 2016 – Aug 2016</i> <ul style="list-style-type: none"><li>• Designed and manufactured an exercise bike with belt transmission</li><li>• Designed and installed an air purification shell to pump out air through the filtration system</li></ul>
<b>TUTOR EXPERIENCE</b>	<b>Undergraduate Education Office, UM-SJTU JI</b> <i>Teaching Assistant @SJTU Sept 2018 – Aug 2019</i> <ul style="list-style-type: none"><li>• Worked as TA for one major course: VM395 Laboratory I</li></ul> <b>Academic Advising Center, UM-SJTU JI</b> <i>Student Advisor @SJTU Sept 2017 – Aug 2019</i> <ul style="list-style-type: none"><li>• Provide academic advice to JI students</li><li>• Hold workshops aiming to promote academic skills and share professional interests</li></ul>
<b>SELECTED HONORS</b>	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 5% in UM-SJTU JI) <i>Nov 2016, Nov 2017</i> Undergraduate Excellent Scholarship (3 times, top 3% in SJTU) <i>Dec 2016, Dec 2017, Dec 2018</i>