

# Xiangyu Liu

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## EDUCATION

### Nanyang Technological University, Singapore

- M.Sc. in Computer Control and Automation Aug 2018 – Jun 2019
  - Dissertation: Quantitative Trajectory Evaluation Criterion and Long-term Enhancement for Multi-Robot SLAM
  - Adviser: Prof. Danwei Wang
  - Focus: Multi-Robot SLAM, Computer Vision.
  - Cumulative GPA: 3.88 / 5.0

### University of Electronic Science and Technology of China, Chengdu, Sichuan, P.R.China

- B.Mgt. in Electronic Commerce Sep 2014 – Jun 2018
- B.Eng. in Electronic Engineering
  - Dissertation: Research on Organizational Attraction of JD.COM in the era of Smart Logistics
  - Guaranteed Postgraduate Qualification,
  - Cumulative GPA: 3.47 / 4.00

## SKILLS

- Excellent in C/C++; Skilled in Python.
- Excellent in Linux, ROS, Matlab, experienced in Qt
- Excellent in computer vision, SLAM theory, programming with popular CV libraries like OpenCV.
- Good understanding in neural network, course-attending in control theory, control network, etc.
- Sufficient hands-on experience in robot development.

## AWARDS & SCHOLARSHIPS

- **National First Award**, in National University Electronics Design Contest, MoE China Aug 2017  
For contest project: panel-ball controlling device
- **National Champion**, in RoboMasters National University Robot Contest, MoE China & DJI Oct 2015 – Aug 2016  
For contest project: RM series robots.
- **National Bronze Award**, in JD X Robot Challenge Contest, JD.COM Apr 2017  
For contest project: Automatic Sorting Robot
- **Awards and Scholarships**, in several other minor university contests held in UESTC Sep 2014 – Jun 2018
- **Guaranteed Postgraduate Qualification**, in UESTC Sep 2017  
For cumulative outstanding performance in national and provincial contests

## PROJECTS

### Robotics ADVANCe Laboratory, NTU

- Master Dissertation Oct 2018 – Apr 2019
  - Project: Place Recognition and Localization for Multi-Robot SLAM
  - Supervisors: Prof. Danwei Wang
  - Focus: SLAM, Multi-Robot SLAM, Computer Vision

### RoboMasters Contest Lab, UESTC

- RoboMasters Contest Robot Design Oct 2015 – Aug 2016
  - Project: UAV for RM Contest
  - Supervisors: Prof. Liping HE
  - Focus: Robot Contest, Computer Vision, Target Recognition, Item Grabbing
- JDX Robot Challenge Jan 2017 – Apr 2017
  - Project: Auto-sorting robot
  - Supervisors: Prof. Liping HE
  - Focus: Robot Contest, 3D Vision, Target Recognition, Item Grabbing
- National University Electronic Design Contest Aug 2017
  - Project: Panel-ball Control Device
  - Supervisors: Prof. Jiexiong Ding
  - Focus: Robot Contest, Target Recognition, Control

### JD.COM X Department, JD.COM

- Internship, Embedded Algorithm Engineer Sep 2017 – Dec 2017
  - Project: Auto-Warehouse AGV
  - Work: Joined the R&D group of auto-warehouse AGVs, help to design and debug the AGV algorithms for smart logistic application.
  - Focus: Smart Logistics, AGV.

	<b>integrated Vision intelligent perception laboratory (iVip), Tsinghua University</b> <ul style="list-style-type: none"> <li>Remote internship May 2020 – Present <ul style="list-style-type: none"> <li>Project: multi-agent reinforcement learning application on formation control</li> <li>Supervisors: A.P. Fei Qiao</li> <li>Focus: multi-agent reinforcement learning, formation control</li> </ul> </li> </ul>
<b>OTHER WORK EXPERIENCE</b>	<b>Nanyang Technological University, Singapore</b> <ul style="list-style-type: none"> <li>Research Associate, NTU-Siemens Cooperative Lab, ERIAN Aborted <ul style="list-style-type: none"> <li>Before the starting date of the job, my work pass application was rejected by MOM, due to the COVID-19 situation. And as a consequence, the job offer was withdrawn.</li> </ul> </li> </ul> <b>Zhejiang University, Hangzhou, China</b> <ul style="list-style-type: none"> <li>Research Assistant, State Key Lab of CAD&amp;CG, College of Computer Science Jun 2020 – Present <ul style="list-style-type: none"> <li>CAD&amp;CG: Computer Aided Design and Computer Graphics</li> <li>Supervisors: Prof. Guofeng Zhang</li> </ul> </li> </ul>
<b>CAMPUS ACTIVITIES</b>	<b>Work-Zone of Innovation And Entrepreneurship, School of Management and Economics, UESTC</b> <ul style="list-style-type: none"> <li>Chief Manager Jul 2015 – Sep 2017 <ul style="list-style-type: none"> <li>Improved the talent-training concept and mechanism.</li> <li>Led the team to finish 11 university-level projects, and won over 10 prizes including 3 national and 1 provincial prizes.</li> </ul> </li> </ul> <b>Gymguys Training and Fitness Company, Branch in. Chicago, USA</b> <ul style="list-style-type: none"> <li>Internship Jul 2015 – Aug 2015 <ul style="list-style-type: none"> <li>Did marketing work as an assistant of the marketing director.</li> </ul> </li> </ul> <b>SMU Entrepreneurship Program, SMU, Singapore</b> <ul style="list-style-type: none"> <li>Course Program Jan 2016 – Feb 2016 <ul style="list-style-type: none"> <li>Attended SMU entrepreneurship courses, including innovation mind, entrepreneurship management, and team management, etc.</li> <li>Finished the business plan training program with the entrepreneurship idea of “THE LAST MILE”, which was focusing on problems of O2O delivery.</li> </ul> </li> </ul>
<b>LANGUAGES</b>	<ul style="list-style-type: none"> <li>Chinese: Native language.</li> <li>English: Fluent (IELTS: 6.5(6)).</li> </ul>
<b>REFERENCES</b>	<ul style="list-style-type: none"> <li><b>Dr Danwei WANG, Professor</b>  Division of Control and Instrumentation, School of Electrical and Electrical Engineering, Block S2  Nanyang Technological University, Nanyang Avenue, Singapore 639798  Office phone: (+65) 6790 5376  School fax: (+65) 6793 3318  E-mail: edwwang@ntu.edu.sg  WWW: <a href="http://www.ntu.edu.sg/home/edwwang">http://www.ntu.edu.sg/home/edwwang</a> </li> <li><b>Dr Liping HE, Professor</b>  PhD, Professor, School of Mechatronics Engineering,  University of Electronic Science and Technology of China,  Tel.: +86-18118010621  Email: <a href="mailto:lipinghe@uestc.edu.cn">lipinghe@uestc.edu.cn</a>  Address: No.2006, Xiyuan Ave, West Hi-tech Zone, 611731 Chengdu, Sichuan, P. R. China </li> </ul>
<b>PUBLICATIONS</b>	<p>[1]X. Liu, J. Chen, S. Wu, X. Ren, and Z. Zhang. Technical report of auto-sorting robot in jdx robot challenge (only in chinese). Technical report, University of Eletronic Science and Technology of China, 10.13140/RG.2.2.24865.22881, 2017.</p> <p>[2]Xiangyu Liu. Research on organizational attraction of jd.com in the era of smart logistics (only in chinese). Bechalar Thesis, University of Eletronic Science and Technology of China, 10.13140/RG.2.2.34092.69760, 2018.</p> <p>[3]Xiangyu Liu. Quantitative trajectory evaluation criterion and long-term enhancement for multi-robot slam. Master’s thesis, Nanyang Technological University Singapore, 10.13140/RG.2.2.14698.88002, 2019.</p>