

# Chi Zhang

GRADUATE, COMPUTER SCIENCE, UNIVERSITY OF CALIFORNIA - LOS ANGELES

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## EDUCATION

**University of California - Los Angeles**, Los Angeles, U.S.

*Master of Science*, Computer Science

Advisor: Prof. Song-Chun Zhu

**GPA: 4.00/4.00** (Overall)

*Sept. 17 - June 19 (Expected)*

**Zhejiang University**, Hangzhou, China

*Bachelor of Engineering*, Computer Science

**GPA: 3.93/4.00** (Overall) **Rank: 1/17**

*Sept. 13 - June 17*

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## RESEARCH INTERESTS

Reinforcement Learning, Robotic Learning and Computer Vision

## RESEARCH EXPERIENCE

**Graduate Student Researcher**

*Center for Vision, Cognition, Learning and Autonomy, UCLA*

Advisor: Prof. Song-Chun Zhu

*Sept. 17 - Present*

- Designed tasks and a real-time 3D rendering algorithm for robotic learning
- Developed a general method for mapping forces onto objects
- Devised an algorithm that combines reinforcement learning with And-Or Graph models for efficient learning

**Research Intern**

*Hong Kong University of Science and Technology*

Advisor: Prof. Dit-Yan Yeung

*Sept. 16 - March 17*

- Introduced the problem of tracking via reinforcement learning for quadcopters and developed an algorithm to solve it

**Research Assistant**

*State Key Lab of CAD & CG, Zhejiang University*

Advisor: Prof. Deng Cai

*March 15 - June 16*

- Used Deep Learning for real-time automatic number plate detection
- Devised a new algorithm for community-based question answering

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## CONFERENCES

Siyi Li, Tianbo Liu, **Chi Zhang**, Dit-Yan Yeung, Shaojie Shen, Learning Unmanned Aerial Vehicle Control for Autonomous Target Following, submitted to *the International Conference on Robotics and Automation 2018* (ICRA 2018), Brisbane, Spain

## JOURNALS

Zheqian Chen, **Chi Zhang**, Zhou Zhao, Deng Cai, Question Retrieval for Community-based Question Answering via Heterogeneous Network Integration Learning, to appear in *Neurocomputing*

## PATENTS

Xiangdong Li, Shihong Lv, Yikun Wang, Xiaowo Sun, **Chi Zhang**, A Method of Exact 3D Modeling Based on Natural Gestures via Data Gloves. Publication number: CN104778746 A. Shared owners, names listed without order.

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PROFESSIONAL EXPERIENCE	<b>Machine Learning Engineer</b> <i>Didi Research Institute</i> <i>Advisor: Zenan Meng</i> <i>April 17 - June 17</i> <ul style="list-style-type: none"> <li>- Improved SLAM algorithms for high-fidelity mapping for autonomous vehicles</li> </ul>
	<b>Software Development Coordinator</b> <i>Windmill Finance</i> <i>Advisor: Dongming Xia</i> <i>March 16 - Sept. 17</i> <ul style="list-style-type: none"> <li>- Coordinated APP development progress in a FinTech start-up with its foreign collaborators</li> </ul>
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HONORS & SCHOLARSHIPS	<b>Excellent Student Scholarship</b> , Zhejiang University, 2013 - 2016 <b>Outstanding Student Scholarship</b> , Zhejiang University, 2013 - 2016 <b>First-class Academic Excellence Scholarship</b> , Zhejiang University, 2013 - 2016 <b>Social Practice Excellence Scholarship</b> , Zhejiang University, 2015 <b>First-class Research and Innovation Scholarship</b> , Zhejiang University, 2015 <b>Chinese Talent Scholarship</b> , Asahi Kasei, 2016 <b>Outstanding University Student Scholarship</b> , Baosteel Group, 2016
AWARDS & PRIZES	Meritorious Winner of <b>Mathematical Contest in Modeling</b> , 2015 Second Prize in <b>Physics Innovation Competition</b> , Zhejiang Province, 2014 Second Prize in <b>Extracurricular Academic Work Competition</b> , Zhejiang University, 2014 <b>Five Star Volunteer</b> , Zhejiang University, 2016
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SELECTED PROJECTS	<b>MXNet</b> <i>Hong Kong University of Science and Technology</i> <i>Advisor: Xingjian Shi</i> <i>Sept. 16 - Present</i> <ul style="list-style-type: none"> <li>- Flexible and efficient machine learning library for heterogeneous distributed systems</li> <li>- Regular contributor</li> </ul>
	<b>Quadrotor Reinforcement Learning for Tracking</b> <i>Hong Kong University of Science and Technology</i> <i>Advisor: Prof. Dit-Yan Yeung and Siyi Li</i> <i>Sept. 16 - Nov. 16</i> <ul style="list-style-type: none"> <li>- Combined PID control loop and reinforcement learning algorithms to train a quadrotor to autonomously learn the concept of tracking</li> <li>- Paper submitted to <i>ICRA 2018</i></li> </ul>
	<b>Real-Time Automatic Number Plate Detection</b> <i>Zhejiang University</i> <i>Advisor: Prof. Deng Cai</i> <i>Feb. 16 - June 16</i> <ul style="list-style-type: none"> <li>- Trained a CNN backbone with YOLOs detection layer for fast and accurate number plate detection and regression</li> <li>- Incorporated into an antonomous vehicle system</li> <li>- Part of <i>National Program on Key Basic Research Project of China</i> (973 Program)</li> </ul>
	<b>Exact 3D Modeling Based on Natural Gestures via Data Gloves</b> <i>Zhejiang University</i> <i>Advisor: Prof. Xiangdong Li and Sihong Lv</i> <i>Dec. 14 - April 15</i> <ul style="list-style-type: none"> <li>- Designed and manufactured a pair of data gloves for gesture detection via Aduino</li> <li>- Collected data and built a Random Forest ensemble using C# and Python</li> <li>- Patented</li> </ul>

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COMPUTER  
SKILLS

**Languages:** C/C++, Python, Matlab, L<sup>A</sup>T<sub>E</sub>X  
**Frameworks:** MXNet, PyTorch

SERVICE

Member of *Forum for American/Chinese Exchange at Stanford* (FACES), Zhejiang University  
Team leader of *Department of Outgoing Global Community Development Program*, AIESEC  
Member of *The Internet Association of Zhejiang University*  
Leader of a voluntary teacher group to Yongle Primary School