# Chi Zhang

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GRADUATE, COMPUTER SCIENCE, UNIVERSITY OF CALIFORNIA - LOS ANGELES

**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

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 algorihm 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

Preprints

Siyi Li, Tianbo Liu, Chi Zhang, Dit-Yan Yeung, Shaojie Shen, Learning Unmanned Aerial Vehicle Control for Autonomous Target Following, arXiv: 1709.08233

Journals

Zheqian Chen, Chi Zhang, Zhou Zhao, Deng Cai, Question Retrieval for Community-based Question Answering via Heterogeneous Social Influential Network, *Neurocomputing*, Volume 285, Pages 117-124

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.

Professional Experience

# Machine Learning Engineer

Didi Research Institute Advisor: Zenan Meng

Advisor: Zenan Meng April 17 - June 17

- Improved SLAM algorithms for high-fidelity mapping for autonomous vehicles

### Software Development Coordinator

 $Windmill\ Finance$ 

Advisor: Dongming Xia

March 16 - Sept. 17

- Coordinated APP development progress in a FinTech start-up with its foreign collaborators

# Honors & Scholarships

Excellent Student Scholarship, Zhejiang University, 2013 - 2016 Outstanding Student Scholarship, Zhejiang University, 2013 - 2016

First-class Academic Excellence Scholarship, Zhejiang University, 2013 - 2016

Social Practice Excellence Scholarship, Zhejiang University, 2015

First-class Research and Innovation Scholarship, Zhejiang University, 2015

Chinese Talent Scholarship, Asahi Kasei, 2016

Outstanding University Student Scholarship, Baosteel Group, 2016

# Awards & Prizes

Meritorious Winner of Mathematical Contest in Modeling, 2015

Second Prize in Physics Innovation Competition, Zhejiang Province, 2014

Second Prize in Extracurricular Academic Work Competition, Zhejiang University, 2014 Five Star Volunteer, Zhejiang University, 2016

# SELECTED PROJECTS

#### MXNet

Hong Kong University of Science and Technology

Advisor: Xingjian Shi

Sept. 16 - Present

- Flexible and efficient machine learning library for heterogeneous distributed systems
- Regular contributor

## Quadrotor Reinforcement Learning for Tracking

Hong Kong University of Science and Technology

Advisor: Prof. Dit-Yan Yeung and Siyi Li

Sept. 16 - Nov. 16

- Combined PID control loop and reinforcement learning algorithms to train a quadrotor to autonomously learn the concept of tracking
- Paper submitted to ICRA 2018

#### Real-Time Automatic Number Plate Detection

Zhejiang University

Advisor: Prof. Deng Cai

Feb. 16 - June 16

- Trained a CNN backbone with YOLOs detection layer for fast and accurate number plate detection and regression
- Incorporated into an antonomous vehicle system
- Part of National Program on Key Basic Research Project of China (973 Program)

### Exact 3D Modeling Based on Natural Gestures via Data Gloves

Zhejiang University

Advisor: Prof. Xiangdong Li and Sihong Lv

Dec. 14 - April 15

- Designed and manufactured a pair of data gloves for gesture detection via Adruino
- Collected data and built a Random Forest ensemble using C# and Python
- Patented

Computer Skills

 ${\bf Languages:~C/C++,~Python,~Matlab,~I\!\!/\!T_E\!X}$ 

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