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Chi Zhang

Ph.D. Candidate, Computer Science, University of California - Los Angeles

Education

University of California - Los Angeles, Los Angeles, U.S.
Doctor of Philosophy, Computer Science — *Sept 17 - Summer 22 (expected)*
Advanced to Candidacy
Advisor: Prof. Song-Chun Zhu
GPA: 4.00/4.00 (Overall)

University of California - Los Angeles, Los Angeles, U.S.
Master of Science, Computer Science — *Sept. 17 - March 19*
Advisor: Prof. Song-Chun Zhu
GPA: 4.00/4.00 (Overall)

Zhejiang University, Hangzhou, China
Bachelor of Engineering, Computer Science — *Sept. 13 - June 17*
GPA: 3.93/4.00 (Overall) **Rank: 1/17**

Research Interests

Visual Reasoning, Abstract Reasoning, Neural-Symbolic Methods, Concept Learning, Computer Vision, Reinforcement Learning

Preprints

Chi Zhang*, Sirui Xie*, Baoxiong Jia*, Ying Nian Wu, Song-Chun Zhu, Yixin Zhu, Learning Algebraic Representation for Abstract Spatial-Temporal Reasoning, *under review.*

Conferences

Chi Zhang, Baoxiong Jia, Mark Edmonds, Song-Chun Zhu, Yixin Zhu, ACRE: Abstract Causal REasoning Beyond Covariation, *To appear in Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition* (**CVPR**), 2021

Chi Zhang*, Baoxiong Jia*, Song-Chun Zhu, Yixin Zhu, Abstract Spatial-Temporal Reasoning via Probabilistic Abduction and Execution, *To appear in Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition* (**CVPR**), 2021

Xu Xie, **Chi Zhang**, Yixin Zhu, Ying Nian Wu, Song-Chun Zhu, Congestion-aware Multi-agent Trajectory Prediction for Collision Avoidance, *To appear in Proceedings of International Conference on Robotics and Automation* (**ICRA**), 2021

Wenhe Zhang, **Chi Zhang**, Yixin Zhu, Song-Chun Zhu, Machine Number Sense: A Dataset of Visual Arithmetic Problems for Abstract and Relational Reasoning, in *Proceedings of AAAI Conference on Artificial Intelligence* (**AAAI**), 2020 (**Oral**)

Chi Zhang*, Baoxiong Jia*, Feng Gao, Yixin Zhu, Hongjing Lu, Song-Chun Zhu, Learning Perceptual Inference by Contrasting, in *Proceedings of Advances in Neural Information Processing Systems* (**NeurIPS**), 2019 (**Spotlight**)

Xu Xie*, Changyang Li*, **Chi Zhang**, Yixin Zhu, Song-Chun Zhu, Learning Virtual Grasp with Failed Demonstrations via Bayesian Inverse Reinforcement Learning, in *Proceedings of International Conference on Intelligent Robots and Systems* (**IROS**), 2019

Chi Zhang*, Feng Gao*, Baoxiong Jia, Yixin Zhu, Song-Chun Zhu, RAVEN: A Dataset for Relational and Analogical Visual rEasoNing, in *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition* (**CVPR**), 2019

Chi Zhang, Yixin Zhu, Song-Chun Zhu, MetaStyle: Three-Way Trade-Off Among Speed, Flexibility, and Quality in Neural Style Transfer, in *Proceedings of AAAI Conference on Artificial Intelligence* (**AAAI**), 2019

Hangxin Liu, **Chi Zhang**, Yixin Zhu, Chenfanfu Jiang, Song-Chun Zhu, Mirroring without Overimitation: Learning Functionally Equivalent Manipulation Actions, in *Proceedings of AAAI Conference on Artificial Intelligence* (**AAAI**), 2019

Siyi Li, Tianbo Liu, **Chi Zhang**, Dit-Yan Yeung, Shaojie Shen, Learning Unmanned Aerial Vehicle Control for Autonomous Target Following, in *Proceedings of the International Joint Conference on Artificial Intelligence* (**IJCAI**), 2018.

Journals

Yixin Zhu, Tao Gao, Lifeng Fan, Siyuan Huang, Mark Edmonds, Hangxin Liu, Feng Gao, **Chi Zhang**, Siyuan Qi, Ying Nian Wu, Joshua B. Tenenbaum, Song-Chun Zhu, Dark, Beyond Deep: A Paradigm Shift to Cognitive AI with Humanlike Common Sense, *Engineering*, Volume 6, Issue 3, Pages 310-345

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.

Service

I review for CVPR 2019, ICCV 2019, AAAI 2020, CVPR 2020, ECCV 2020, NeurIPS 2020, AAAI 2021, ICLR 2021, CVPR 2021, ICCV 2021, ICML 2021.

Professional Experience

Machine Learning Engineer
Didi Research Institute
Advisor: Zenan Meng *April 17 - June 17*

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

Honors & Scholarships

Travel Award, NeurIPS, 2019
First-class Academic Excellence Scholarship, Zhejiang University, 2013 - 2016
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
Five Star Volunteer, Zhejiang University, 2016

Selected Projects

MXNet
Hong Kong University of Science and Technology
Advisor: Xingjian Shi *Sept. 16 - April 17*

- Flexible and efficient machine learning library for heterogeneous distributed systems