Lifeng Fan

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EDUCATION

University of California, Los Angeles, CA, USA

09/2016 - 06/2021 (expected)

Ph.D. Candidate in Statistics

GPA:4.00/4.00

Zhejiang University, Hangzhou, China

09/2012 - 06/2016

B.S. in Statistics, Minor in Public Management

GPA: 3.98/4.00

RESEARCH EXPERIENCE DMAI Inc., Los Angeles, CA, USA

06/2019 - present Mentor: Yixin Zhu

Software Engineering Intern

• Cognitive Platform: detecting human body pose, head pose and pointing gesture; detecting human interaction and communication; modeling human mind, including belief, attention and intention

Center for Vision, Cognition, Learning and Autonomy, UCLA 09/2016 - present Graduate Student Researcher Advisor: Song-Chun Zhu

- Cooperation and Communication Mechanisms: the emergence of communicative cooperation in a problem-solving task.
- Theory of Mind: human mental state inference in VR environment and real videos
- \bullet Understanding human nonverbal communication by spatio-temporal reasoning networks
- Social Scene Understanding: inferring shared attention in social scene videos
- Cognitive Modeling: perception of human interaction based on motion trajectories

The Computational Vision and Learning Lab, UCLA

07/2015 - 09/2015

Cross-Disciplinary Scholars in Science and Technology (CSST) Program Advisor: Hongjing Lu

- Discovering hierarchical representations for action recognition
- Honored with Best Presentation Award for excellent research and final presentation

State Key Lab of CAD, ZJU

06/2014 - 06/2016

Research Assistant

Advisor: Ming Li

• Texture synthesis optimization by Expectation Maximization algorithm

Publications

(* indicates equal contribution)

Y. Zhu, T. Gao, L. Fan, S. Huang, M. Edmonds, H. Liu, F. Gao, C. Zhang, S. Qi, Y. Wu, J. B. Tenenbaum, S.-C. Zhu. Dark, Beyond Deep: A Paradigm Shift to Cognitive AI with Human-like Commonsense. *Engineering*. (Under Review)

T. Yuan, H. Liu, L. Fan, Z. Zheng, T. Gao, Y, Zhu, S.-C. Zhu. Understanding False-Belief by Joint Inference of Object States, Robot Knowledge, and Human Beliefs. (Under Review)

L. Fan*, W. Wang*, S. Huang, X. Tang and S.-C. Zhu. Understanding Human Gaze Communication by Spatio-temporal Graph Reasoning. *IEEE International Conference on Computer Vision (ICCV)*, 2019.

L. Fan*, Y. Chen*, P. Wei, W. Wang and S.-C. Zhu. Inferring Shared Attention in Social Scene Videos. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2018. (Acceptance Rate: 29%)

T. Shu*, Y. Peng*, L. Fan, H. Lu and S.-C. Zhu. Perception of Human Interaction Based on Motion Trajectories: from Aerial Videos to Decontextualized Animations. *Topics in Cognitive Science (TopiCS)*, 10(1): 225 - 241, 2018.

T. Shu*, Y. Peng*, L. Fan, H. Lu and S.-C. Zhu. Inferring Human Interaction from Motion Trajectories in Aerial Videos. 39th Annual Meeting of the Cognitive Science Society (CogSci), 2017. (Oral presentation, Acceptance rate: 255/873 = 29%, Computational Modeling Prize)

SELECTED HORNORS AND AWARDS

Most Promising Computational Statistician, UCLA Statistics Department

06/2017

Computational Modeling Prize, Cognitive Science Society

06/2017

The 6th Ten Top Students in Zhejiang University, Zhejiang University 12/2015 (Awarded to 10 out of all undergraduate and graduate students at Zhejiang University for meritorious achievements at Zhejiang University.)

Chu Kochen Scholarship, Zhejiang University

10/2015

(The highest honor of Zhejiang University, awarded to 12 out of 5000+ undergraduate seniors each year for exceptional academic achievements.)

Best Presentation Award, UCLA-CSST Summer Research Program

09/2015

Honorable Mention, Mathematical Contest in Modeling (MCM)

04/2015

Tang Lixin Scholarship, Zhejiang University

10/2014 - present

06/2014

National Scholarship of China, Ministry of Education, China

2013, 2014

TEACHING EXPERIENCE

University of California, Los Angeles, Department of Statistics

First Prize in the 12th Mathematical Modeling Contest of Zhejiang University

STATS 202A: Statistics Programming

Fall 2017

Winter 2018

- Teaching Assistant

STATS 12: Intro to Statistical Methods for Geography and Environmental

 $\begin{array}{c} Studies \\ \text{- Teaching Assistant} \end{array}$

STATS 102C: Introduction to Monte Carlo Methods

Fall 2018

- Teaching Assistant

PROGRAMMING LANGUAGES

PROGRAMMING C/C++, C#, Python, MATLAB, R, LATEX, HTML

DEEP LEARNING Pytorch, Tensorflow, Keras

Frameworks