

YUKE ZHU

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RESEARCH INTERESTS

Computer Vision, Robotics, Deep Learning, Knowledge Representation

EDUCATION

Stanford University, PhD in Computer Science 2015 – present

- Overall GPA: 4.0 / 4.0
- Advisor: Prof. Fei-Fei Li and Prof. Silvio Savarese

Stanford University, MSc in Computer Science 2013 – 2015

- Overall GPA: 3.98 / 4.0
- Advisor: Prof. Fei-Fei Li

Simon Fraser University, BSc in Computer Science 2011 – 2013

- Overall GPA: 4.27 / 4.3 (First class with distinction)
- Advisor: Prof. Greg Mori and Prof. Oliver Schulte

Zhejiang University, BEng in Computer Science and Technology 2009 – 2013

- Overall GPA: 3.96 / 4.0 (Ranked 1st out of 31)

PUBLICATIONS

Neural Task Programming: Learning to Generalize Across Hierarchical Tasks. *International Conference on Robotics and Automation (ICRA)*, 2018. Danfei Xu*, Suraj Nair*, Yuke Zhu, Julian Gao, Animesh Garg, Li Fei-Fei, Silvio Savarese [* indicates equal contribution]

Vicus: Exploiting Local Structures to Improve Network-based Analysis of Biological Data. *PLOS Computational Biology*, 2017. Bo Wang, Lin Huang, Yuke Zhu, Anshul Kundaje, Serafim Batzoglou, Anna Goldenberg

ADAPT: Zero-Shot Adaptive Policy Transfer for Stochastic Dynamical Systems. *International Symposium on Robotics Research (ISRR)*, 2017. James Harrison*, Animesh Garg*, Boris Ivanovic, Yuke Zhu, Silvio Savarese, Li Fei-Fei, Marco Pavone [* indicates equal contribution]

Visual Semantic Planning using Deep Successor Representations. *International Conference on Computer Vision (ICCV)*, 2017. Yuke Zhu*, Daniel Gordon*, Eric Kolve, Dieter Fox, Li Fei-Fei, Abhinav Gupta, Roozbeh Mottaghi, Ali Farhadi [* indicates equal contribution]

Adversarially Robust Policy Learning through Active Construction of Physically-Plausible Perturbations. *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2017. Ajay Mandlekar*, Yuke Zhu*, Animesh Garg*, Li Fei-Fei, Silvio Savarese [* indicates equal contribution]

Knowledge Acquisition for Visual Question Answering via Iterative Querying. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2017. Y. Zhu, J. J. Lim, and L. Fei-Fei

Scene Graph Generation by Iterative Message Passing. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2017. D. Xu, Y. Zhu, C. B. Choy, L. Fei-Fei

Target-driven Visual Navigation in Indoor Scenes using Deep Reinforcement Learning. *IEEE International Conference on Robotics and Automation (ICRA)*, 2017. Y. Zhu, R. Mottaghi, E. Kolve, J. J. Lim, A. Gupta, L. Fei-Fei, and A. Farhadi

Visual Genome: Connecting Language and Vision Using Crowdsourced Dense Image Annotations. *International Journal of Computer Vision (IJCV)*, 2017. R. Krishna, Y. Zhu, O. Groth, J. Johnson, K. Hata, J. Kravitz, S. Chen, Y. Kalantidis, L.-J. Li, D. A. Shamma, M. Bernstein, and L. Fei-Fei

Visual7W: Grounded Question Answering in Images. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2016. Y. Zhu, G. Oliver, M. Bernstein, and L. Fei-Fei.

Action Recognition by Hierarchical Mid-level Action Elements. *International Conference on Computer Vision (ICCV)*, 2015. T. Lan*, Y. Zhu*, A. Zamir, and S. Savarese [* indicates equal contribution]

Reasoning About Object Affordances in a Knowledge Base Representation. *European Conference on Computer Vision (ECCV)*, 2014. Y. Zhu, A. Fathi, and L. Fei-Fei

Modelling Relational Statistics With Bayes Nets. *Machine Learning Journal* 94(1):105-125, 2014. O. Schulte, H. Khosravi, A. Kirkpatrick, T. Gao, and Y. Zhu

StrokeBank: Automating Personalized Chinese Handwriting Generation. *AAAI Conference on Innovative Applications of Artificial Intelligence (IAAI)*, 2014. A. Zong and Y. Zhu

Latent Spatio-temporal Models for Action Localization and Recognition in Nursing Home Surveillance Video. *IAPR International Conference on Machine Vision Applications (MVA)*, 2013. Y. Zhu, T. Lan, Y. Yang, S. Robinovitch, and G. Mori

Graphical Model-based Learning in High Dimensional Feature Spaces. *AAAI Conference on Artificial Intelligence (AAAI)*, 2013. Z. Song and Y. Zhu

PREPRINTS

Reinforcement and Imitation Learning for Diverse Visuomotor Skills. *arXiv:1802.09564*. Yuke Zhu, Ziyu Wang, Josh Merel, Andrei Rusu, Tom Erez, Serkan Cabi, Saran Tunyasuvunakool, János Kramár, Raia Hadsell, Nando de Freitas, Nicolas Heess

AI2-THOR: An Interactive 3D Environment for Visual AI. *arXiv:1712.05474*. Eric Kolve, Roozbeh Mottaghi, Daniel Gordon, Yuke Zhu, Abhinav Gupta, Ali Farhadi

Building a Large-scale Multimodal Knowledge Base System for Answering Visual Queries. *arXiv:1507.05670*. Y. Zhu, C. Zhang, C. Ré, and L. Fei-Fei

SERVICES

Organizer: Stanford Semantics and Geometry Seminars

Conference reviewer: CVPR, ECCV, ICCV, IROS, ICRA

Journal reviewer: T-PAMI, T-MM, RL-L, ACM Computing Surveys (CSUR)

Program committee:

ICCV 2017 Workshop: Vision in Practice on Autonomous Robots (ViPAR)

NIPS 2017 Workshop: Challenges in Robot Learning

TEACHING EXPERIENCE

Teaching Assistant, Stanford University

Winter 2014-2015

CS 231N: Convolutional Neural Networks for Visual Recognition

Teaching Assistant, Stanford University

Fall 2014-2015

CS 131: Computer Vision: Foundations and Applications

Teaching Assistant, Stanford University

Summer 2013-2014

CS 193C: Client-Side Internet Technologies

Teaching Assistant, Stanford University

Spring 2013-2014

CS 431: High-Level Vision - Behaviors, Neurons and Computational Models

PROFESSIONAL EXPERIENCE

Research Intern

Jun - Sept 2017

DeepMind, London, England, UK

- Deep reinforcement learning for vision-based robot manipulation

Research Intern

Jun - Sept 2016

Allen Institute for Artificial Intelligence, Seattle, WA, USA

- Building photorealistic simulated 3D environments for visual AI

Research Intern

May - Aug 2015

Snap Inc., Venice, CA, USA

- Deep learning and computer vision projects in the Snap Research team

Software Engineer Intern

Apr – July 2013

Twitter Inc., San Francisco, CA, USA

- Growth hacking in the Activation & Messaging team for Twitter user retention

Research Assistant

Jan 2012 – Apr 2013

SFU Vision and Media Lab, Burnaby, Canada

- Research in action understanding for Technology for Injury Prevention in Seniors program

Research Assistant

Dec 2011 – Apr 2013

SFU Computational Logic Lab, Burnaby, Canada

- Research in statistical relational learning and probabilistic graphical models

Co-founder

Aug 2011 - Aug 2013

Hangzhou Iserlohn Technology Co., Ltd., Hangzhou, China

- Startup for mobile integration, enterprise IT solutions and business information systems

Software Engineer Intern

July - Aug 2011

Qingdao Topcomm Communication Co., Ltd., Qingdao, P.R.China

- Developing router testing framework for electric energy data acquisition system

HONORS/AWARDS

Honors & Scholarships

- Tencent AI Lab PhD Fellowship
- AAAI-14 Scholarship
- National Scholarship of China 2010 & 2011 (Top 2% in Zhejiang University)
- Zhejiang University First-class Academic Excellence Scholarship
- Zhejiang University Research and Innovation Scholarship
- Simon Fraser University Entrance Scholarship
- Simon Fraser University Alumni Scholarship
- Simon Fraser University Open Scholarship

Awards & Prizes

- DDP Outstanding Academic Achievement Award
- Gold Medal in the 8th ACM/ICPC Programming Contest of Zhejiang Province

- First Prize in the 10th ACM/ICPC Programming Contest of Zhejiang University
- 1st Place in Simon Fraser University 8th Annual Winter Programming Contest
- 5th Place in the 2012 ACM Pacific Northwest Programming Contest
- Meritorious Winner in International Interdisciplinary Contest In Modeling
- First Prize in National Olympiad of Informatics in Shandong Province
- Simon Fraser University President's Honour Roll
- Simon Fraser University Computing Science Graduation Award