Yutong (Kelly) He

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Education

2019 – 2022 **Stanford University** – Stanford, CA
MS in Computer Science (with Distinction in Research)
GPA: 4.26/4.30

2015 – 2019 **University of Rochester** – Rochester, NY
BS in Mathematics (with Highest Distinction)
BS in Data Science (with Highest Distinction)
GPA: 3.95/4.00

Honors and Scholarships

2022 Outstanding Paper at ICLR 2022

2021 2nd place in Alexa Prize Socialbot Grand Challenge 4

2020 Siebel Scholar 2020-2021

2019-2020 Best Project Awards at Stanford CS 229, CS 224N, CS 230

2019 Doris Ermine Smith Award for Achievement in Mathematics

2019 Phi Beta Kappa

2018 University of Rochester Research Presentation Award

2018 University of Rochester Discovery Grant

2017 Xerox Engineering Research Fellowship

Publications

2022 **Comparing Distributions by Measuring Differences that Affect Decision Making**
Shengjia Zhao*, Abhishek Sinha*, **Yutong He***, Aidan Perreault, Jiaming Song, Stefano Ermon
International Conference on Learning Representations (ICLR 2022)

2022 **SDEdit: Guided Image Synthesis and Editing with Stochastic Differential Equations**
Chenlin Meng, **Yutong He**, Yang Song, Jiaming Song, Jiajun Wu, Jun-Yan Zhu, Stefano Ermon
International Conference on Learning Representations (ICLR 2022)

2021 **Spatial-Temporal Super-Resolution of Satellite Imagery via Conditional Pixel Synthesis**
Yutong He, Dingjie Wang, Nicholas Lai, William Zhang, Chenlin Meng, Marshall Burke, David B. Lobell, Stefano Ermon
Neural Information Processing Systems (NeurIPS 2021)

2021 **Tracking Urbanization in Developing Regions with Remote Sensing Spatial-Temporal Super-Resolution**
Yutong He*, William Zhang*, Chenlin Meng, Marshall Burke, David B. Lobell, Stefano Ermon
Neural Information Processing Systems (NeurIPS 2021) workshop on Machine Learning for the Developing World (ML4D)

2021 **Neural, Neural Everywhere: Controlled Generation Meets Scaffolded, Structured Dialogue**
Ethan A. Chi, Caleb Chiam, Trenton Chang, Swee Kiat Lim, Chetanya Rastogi, Alexander Iyabor, **Yutong He**, Hari Sowrirajan, Avanika Narayan, Jillian Tang, Haojun Li, Ashwin Paranjape, Christopher D. Manning
Alexa Prize Proceedings 2021

2020 **Fine-grained Image-to-Image Transformation towards Visual Recognition**
Wei Xiong, **Yutong He**, Yixuan Zhang, Wenhan Luo, Lin Ma, and Jiebo Luo
International Conference on Computer Vision and Pattern Recognition (CVPR 2020)

2020 **Motion-based Handwriting Recognition and Word Reconstruction**
Junshen Kevin Chen*, Wanze Xie*, **Yutong He***
arXiv:2101.06025

Industry Experience

Summer 2020 **Adobe Inc. (Machine Learning Engineer Intern)** – San Jose, CA
Worked in Sensei & Search team on visual-textual search and recommendation for E-commerce.

Teaching Experience

Winter 2022 **CS 228: Probabilistic Graphical Models (Stanford)**
TA and lecturer on Markov chain Monte Carlo

Fall 2021 **CS 236: Deep Generative Models (Stanford)**
TA and lecturer on neural networks

Winter 2021 **CS 228: Probabilistic Graphical Models (Stanford)**
TA and lecturer on Markov chain Monte Carlo

Spring 2019 **CSC 249/449: Machine Vision (University of Rochester)**
Teaching Assistant

Fall 2018 **DSC 262/462: Computational Introduction to Statistics (University of Rochester)**
Teaching Assistant

Spring 2018 **CSC 242/442: Data Mining (University of Rochester)**
Teaching Assistant

Spring 2018 **MTH 150: Discrete Mathematics (University of Rochester)**
Teaching Assistant

Fall 2017 **CSC 242/442: Artificial Intelligence (University of Rochester)**
Teaching Assistant

Fall 2017 **CSC 261/461: Database System (University of Rochester)**
Teaching Assistant

Fall 2017 **MTH 201: Introduction to Probability (University of Rochester)**
Teaching Assistant

Spring 2017 **CSC 172: Data Structures and Algorithms (University of Rochester)**
Workshop Leader

Spring 2017 **MTH 162: Calculus IIA (University of Rochester)**
Workshop Leader

Fall 2016 **CSC 171: Introduction to Computer Science (University of Rochester)**
Workshop Leader

Fall 2016 **MTH 141: Calculus I (University of Rochester)**
Workshop Leader

Leadership and Mentorship

2021 **Stanford AI4ALL (Computer Vision Mentor)**
Led a group of high school students from under-represented populations to complete a hands-on research project in computer vision, and provided them exposure to a variety of AI topics, in-depth discussions of cutting-edge AI research, and exploration of the humanistic and societal impact of AI.

2021 **Stanford CURIS Program for Undergraduate Research (Mentor)**
Mentored a group of undergraduate students on artificial intelligence research projects.

2020 **Stanford Summer Undergraduate Research Fellowship (Graduate Student Mentor)**
Advised Summer Undergraduate Research Fellowship (SURF) scholars to reflect on their summer research/professional development experience, learn about the graduate school application process, and gain insight into graduate student life, specifically at Stanford.

2018-2019 **University of Rochester Computer Science Undergraduate Council (President)**

- Served as a representative of the undergraduate students in computer science community in University of Rochester and a bridge of communication between computer science undergraduate students and the graduate students, faculty members, other departments and other schools.
- Hosted university hackathons, department town halls, social events, and panels.
- Organized teams to attend international programming competitions.

2018-2019 **University of Rochester Goergen Institute for Data Science (Peer Advisor)**
Advised students on declaring majors, making connections with faculty members, reviewing research opportunities, and exploring interdisciplinary study.

2016-2019 **University of Rochester Computer Science Undergraduate Council (Tutor)**
Held weekly voluntary tutoring session for computer science, mathematics, statistics courses.

Technical Skills

Programming languages
Python, Java, R, SQL, Bash, C/C++, MATLAB, CUDA, Lisp, HTML/CSS, JavaScript

Software
LaTeX, Git, PyTorch, TensorFlow, Keras, Scikit-learn, RStudio, Jupyter Lab/Notebook, Gdb, Valgrind, Adobe Photoshop, Adobe Premiere Pro

Languages
Chinese (fluent), English (fluent), Japanese (intermediate), Spanish (elementary)