

Michelle Guo

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<https://scholar.google.com/citations?user=lyjipNMAAAAJ&hl=en>

Education

Stanford University

PhD, Computer Science
MS, Computer Science
BS, Computer Science

Stanford, CA

2019 - 2025 (Expected)
2018 - 2019
2014 - 2019

Industry Experience

Meta Reality Labs, Research Scientist Intern	2024 - 2025
X, the moonshot factory, AI Resident	2021
Google Research, Research Intern	2020
Google, Associate Product Manager Intern	2017
Palantir, Forward Deployed Engineer Intern	2016
Google, Software Engineering Intern	2015

Conference and Journal Publications

PGC: Physics-Based Gaussian Cloth from a Single Pose

Conference on Computer Vision and Pattern Recognition (CVPR), 2025 (Highlight)

M Guo, MJ Chiang, I Santesteban, N Sarafianos, H Chen, O Halimi, A Bozic, S Saito, J Wu, CK Liu, T Stuyck, E Larionov

CRAFT: Designing Creative and Functional 3D Objects

Winter Conference on Applications of Computer Vision (WACV), 2025

M Guo*, M Tang*, H Cha, R Zhang, CK Liu, J Wu

Learning to design 3d printable adaptations on everyday objects for robot manipulation

IEEE International Conference on Robotics and Automation (ICRA), 2024

M Guo, Z Liu, S Tian, Z Xie, J Wu, CK Liu

Learning to Design and Use Tools for Robotic Manipulation

Conference on Robot Learning (CoRL), 2023

Z Liu*, S Tian*, M Guo, CK Liu, J Wu

Learning Object-Centric Neural Scattering Functions for Free-viewpoint Relighting and Scene Composition

Transactions on Machine Learning Research (TMLR), 2023

HX Yu*, M Guo*, A Fathi, YY Chang, ER Chan, R Gao, T Funkhouser, J Wu

Differentiable Physics Simulation of Dynamics-Augmented Neural Objects

International Conference on Intelligent Robots and Systems (RA-L & IROS), 2023

S Le Cleac'h, H Yu, M Guo, T Howell, R Gao, J Wu, Z Manchester, M Schwager

Benchmarking Rigid Body Contact Models

Learning for Dynamics & Control Conference (L4DC), 2023

M Guo, Y Jiang, A Spielberg, J Wu, CK Liu

Learning diverse and physically feasible dexterous grasps with generative model and bilevel optimization

Conference on Robot Learning (CoRL), 2022

A Wu, M Guo, CK Liu

Dash: Modularized human manipulation simulation with vision and language for embodied AI

ACM SIGGRAPH/Eurographics Symposium on Computer Animation (SCA), 2021

Y Jiang, M Guo, J Li, I Exarchos, J Wu, CK Liu

Automatic detection of hand hygiene using computer vision technology

Journal of the American Medical Informatics Association (JAMA), 2020

A Singh, A Haque, A Alahi, S Yeung, M Guo, JR Glassman, W Beninati, T Platchek, L Fei-Fei, A Milstein

A Computer Vision System for Deep Learning-Based Detection of Patient Mobilization Activities in the ICU

Nature (npj) Digital Medicine, 2019

S Yeung*, F Rinaldo*, J Jopling, B Liu, R Mehra, NL Downing, M Guo, GM Bianconi, A Alahi, J Lee, B Campbell, K Deru, W Beninati, L Fei-Fei, A Milstein

Audio-Linguistic Embeddings for Spoken Sentences

IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), 2019

A Haque, M Guo, P Verma, L Fei-Fei.

Neural Graph Matching Networks for Fewshot 3D Action Recognition

European Conference on Computer Vision (ECCV), 2018

M Guo, E Chou, DA Huang, S Song, S Yeung, L Fei-Fei

Focus on the Hard Things: Dynamic Task Prioritization for Multitask Learning

European Conference on Computer Vision (ECCV), 2018

M Guo, A Haque, DA Huang, S Yeung, L Fei-Fei

Conditional End-to-End Audio Transforms

Conference of the International Speech Communication Association (Interspeech), 2018

A Haque*, M Guo*, P Verma

3D Point Cloud-Based Visual Prediction of ICU Mobility Care Activities

Machine Learning for Healthcare Conference (MLHC), 2018

B Liu*, M Guo*, E Chou, R Mehra, S Yeung, NL Downing, F Salipur, J Jopling, B Campbell, K Deru, W Beninati, A Milstein, L Fei-Fei

Towards Vision-Based Smart Hospitals: A System for Tracking and Monitoring Hand Hygiene Compliance

Machine Learning for Healthcare Conference (MLHC), 2017

A Haque, M Guo, A Alahi, S Yeung, Z Luo, A Rege, J Jopling, NL Downing, W Beninati, A Singh, T Platchek, A Milstein, L Fei-Fei

Knowledge Distillation for Small-footprint Highway Networks

IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), 2017

L Lu, M Guo, S Renals

Lithium-Rich Giants in Globular Clusters

The Astrophysical Journal (ApJ), 2016

EN Kirby, P Guhathakurta, AJ Zhang, J Hong, M Guo, R Guo, JG Cohen, K Cunha

Carbon in Red Giants in Globular Clusters and Dwarf Spheroidal Galaxies

The Astrophysical Journal (ApJ), 2015

EN Kirby, M Guo, AJ Zhang, M Deng, JG Cohen, P Guhathakurta, MD Shetrone, YS Lee, L Rizzi

Workshop Papers

A Haque, **M Guo**, A Miner, L Fei-Fei. "Measuring the Severity of Depressive Symptoms from Spoken Language and 3D Facial Expressions." *NeurIPS Workshop on Machine Learning for Health (ML4H)*, 2018.

E Chou, M Tan, C Zou, **M Guo**, A Haque, A Milstein, L Fei-Fei. "Activity Recognition from Low Resolution Images." *NeurIPS Workshop on Machine Learning for Health (ML4H)*, 2018.

M Guo, A Haque, J Jopling, L Downing, A Alahi, B Campbell, K Deru, W Beninati, A Milstein, L Fei-Fei. "Viewpoint Invariant Convolutional Networks for Identifying Risky Hand Hygiene Scenarios." *NIPS Workshop on Machine Learning for Health (ML4H)*, 2017.

Fellowships

Qualcomm Innovation Fellowship	2021
National Science Foundation Graduate Fellowship	2020
Facebook Fellowship	2020
Stanford Data Science Initiative (SDSI) PhD Scholar (declined)	2020

Grant Awards

A Miner, A Haque, **M Guo**, B Arnow, S Agras, N Shah. "Development and validation of a HIPAA-Compliant Approach for Assessing and Understanding Effective Psychotherapy." *Stanford Human-Centered Artificial Intelligence Institute (HAI) Seed Grant*, 2019. \$75,000

M Guo, A Milstein, L Fei-Fei. "A Smart Learning Healthcare System for Human Behavior Change". *Stanford Human-Centered Artificial Intelligence Institute (HAI) Seed Grant*, 2018. \$50,000

Outreach

Stanford AI4ALL, Co-Organizer 2018
Organized 3-week camp for high school girls
Hands-on introduction to CS and AI, aiming to increase diversity in AI

Stanford AI4ALL, Research Mentor 2018
Mentored a team of eight high school girls on predicting poverty using computer vision from satellite images.

Mentoring and Advising

Evan Li (PhD)
Emily Ling (MS)
Emanuel Cortes (BS)
Lily Li (High School)

Teaching Experience

Stanford CS197: Computer Science Research Spring 2022

Stanford CS337: AI-Assisted Care Fall 2018

Stanford CS231N: Convolutional Neural Networks for Visual Recognition Spring 2018

Invited Talks

How can ML be used to both lower costs and improve the quality of healthcare. *Machine Learning for Healthcare Conference (MLHC) Tutorial*. August 2018.

Professional Activities

Program Committee

Machine Learning for Healthcare Workshop, NeurIPS 2018

Invited Journal, Conference, and Workshop Reviews

ACM SIGGRAPH 2022

International Conference on Learning Representations (ICLR) 2022

IEEE Transactions on Image Processing (TIP) 2018

Journal of Medical Systems (JoMS) 2018

Machine Learning for Healthcare Workshop (ML4H), NIPS 2017, 2018, 2019

ACM Conference on Human Factors in Computer Systems (CHI) 2018

Machine Learning for Healthcare Conference (MLHC) 2018, 2019

Service

Stanford PhD Admissions Committee, 2020

Campus Activities

Stanford CS+Social Good. Executive Board (2015-2016)

Stanford Business Association of Entrepreneurial Students. Officer (2015-2016)

Stanford Association for Computing Machinery (ACM). Officer (2015-2016)

Stanford Women in Computer Science (WiCS). Board Member (2014-2015)

Stanford Asia-Pacific Student Entrepreneurship Society. Officer (2014-2015)

Stanford Taiwanese Cultural Society (TCS). Core Team (2014-2015)

Selected Press Coverage

“A New Study Shows What It Might Take To Make AI Useful in Health Care”. MIT Technology Review. 23 March 2019.

“Best of ECCV 2018”. Computer Vision News. October 2018.

“Neural Graph Matching Networks for Fewshot 3D Action Recognition”. Computer Vision News. 11 September 2018.

“Do Doctors and Nurses Skip Handwashing? Cue the Video,” by Lisa Ward. The Wall Street Journal. 28 May 2018.