

Hao Zhang

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Research Interest

I study the intersection area of machine learning and systems. I am equally interested in designing strong, efficient, and secure machine learning models and algorithms, and in building scalable, practical distributed systems that can support real-world machine learning workloads.

Education

Robotics Institute, School of Computer Science, Carnegie Mellon University

Ph.D. in Robotics, 2014 - 2020

Advisor: Eric Xing

Ph.D. Dissertation: Machine Learning Parallelism Could Be Adaptive, Composable and Automated.

Department of Computer Science and Engineering, Shanghai Jiao Tong University

M.S. in Computer Science, 2011 - 2014

School of Computer Science and Engineering, South China University of Technology

B.E. in Computer Science, the Elite Class of Computer Science, 2008 - 2011

Positions

University of California, San Diego

Assistant Professor, July 2023 - Present.

University of California, Berkeley

Postdoctoral Researcher, with Ion Stoica, August 2020 - July 2023.

Petuum Inc, Pittsburgh

Research Scientist, Jan 2020 – Jan 2023.

Director of Scalable ML, December 2017 – Jan 2020.

Tech Lead, May 2017 – December 2017.

Consultant, Jul 2016 – May 2017.

Microsoft Research Asia, Beijing

Research Intern, July 2013 - January 2014.

Microsoft, Shanghai

SDE Intern, September 2012 - April 2013.

Awards and Honors

Jay Lepreau Best Paper Award, OSDI 2021.

NVIDIA Pioneer Research Award, NeurIPS 2017.

Excellent Graduates (top 5%), Shanghai Jiao Tong University, 2014.

Scholarship for Graduates, Shanghai Jiao Tong University, 2011 - 2014.

Google Excellence Scholarship, Google Inc., 2013.

Early Graduate Honor (top 1%), South China University of Technology, 2011.

Excellent Undergraduates, South China University of Technology, 2008 - 2011.

1st Class Scholarship (top 10%), South China University of Technology, 2008 - 2011.

Publications

See [Google Scholar Profile](#)

Professional Service and Leadership

Cofounder. [LMSYS Org](#).

Organizer. RISE Camp 2021.

Program Committee. AAAI, UAI, ICML, NeurIPS, MLSYS.

Reviewer. ICLR, NeurIPS, ACL, ECCV, AISTATS, ICML, NACCL HLT, CVPR, ICCV, TPAMI, SCIS, IET Computer Vision, MVAP, TCC, VLDB, etc.

Volunteer. ICML, KDD.

Tutorial and Invited Talks

Tutorial, “*Welcome to the "Big Model" Era: Techniques and Systems to Train and Serve Bigger Models*”. ICML 2022, with Zhuohan Li, Lianmin Zheng, and Ion Stoica.

Tutorial, “*Simple and Automatic Distributed Machine Learning on Ray*”. KDD 2021, with Zhuohan Li, Lianmin Zheng, and Ion Stoica.

Tutorial, “*Simplifying and Automating Parallel Machine Learning via a Programmable and Composable Parallel ML System*”. AAAI 2021, with Aurick Qiao, Qirong Ho and Eric Xing.

Invited Talk, “*Collective-on-Ray: High-performance Collective Communication for Distributed Machine Learning on Ray*”. Ray Summit 2021.

Invited Talk, “*Machine Learning Parallelism Could Be Adaptive, Composable, and Automated*”. UC Berkeley RISELab Seminar, 2020.

Tutorial, “*Arion: a Next-generation Distributed Deep Learning Virtual Machine*”. ICML 2019 Expo Day. .

Invited Talk. “*Cavs: A Vertex-centric Programming Interface for Dynamic Neural Networks*”. NeurIPS 2017 MLSys Workshop.

Patents

A System with Hybrid Communication Strategy for Large-scale Distributed Deep Learning. US Patent US0330276A1, 2018.

Structure Correcting Adversarial Network for Chest X-Rays Organ Segmentation. US Patent US0276825A1, 2018.

Last updated: August 21, 2023