

Jiancheng Liu

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EDUCATION

Michigan State University, East Lansing, Michigan
Master of Science, Advisor: Prof. [Sijia Liu](#)

Spring 2023 - Present
Computer Science and Engineering

Tsinghua University, Beijing, China
Bachelor of Engineering

Fall 2015 - Spring 2020
Institute for Interdisciplinary Information Sciences

— Selected for the prestigious *Yao Class*, an elite program for talented students, directed by Prof. [Andrew C. Yao](#).

PROFESSIONAL EXPERIENCE

IBM Research, Almaden
Research Intern

San Jose, California
2024

Taichi Graphics Technology, Inc.
Research Engineer

Beijing, China
2021 – 2022

Massachusetts Institute of Technology
Research Intern, Advisor: Prof. [Wojciech Matusik](#)

Cambridge, Massachusetts
2018

Cornell University
Research Intern, Advisor: Prof. [Kilian Q. Weinberger](#), Prof. [Gao Huang](#)

Ithaca, New York
2018

Megvii Technology, Inc.
Research Intern

Beijing, China
2016 – 2017

PUBLICATIONS

* denotes equal contribution.

CONFERENCES

- J. Liu***, C. Fan*, Y. Zhang, E. Wong, D. Wei, S. Liu, “*SalUn: Empowering Machine Unlearning via Gradient-based Weight Saliency in Both Image Classification and Generation*”, **ICLR’24**. (**Spotlight, acceptance rate ~ 5%**)
- A. Chen*, Y. Zhang*, J. Jia, J. Diffenderfer, **J. Liu**, K. Parasyris, Y. Zhang, Z. Zhang, B. Kailkhura, S. Liu, “*DeepZero: Scaling up Zeroth-Order Optimization for Deep Model Training*”, **ICLR’24**.
- J. Liu***, J. Jia*, P. Ram, Y. Yao, G. Liu, Y. Liu, P. Sharma, S. Liu, “*Model Sparsity Can Simplify Machine Unlearning*”, **NeurIPS’23**. (**Spotlight, acceptance rate ~ 3%**)
- Y. Zhang*, Y. Zhang*, A. Chen*, J. Jia, **J. Liu**, G. Liu, M. Hong, S. Chang, S. Liu, “*Selectivity Drives Productivity: Efficient Dataset Pruning for Enhanced Transfer Learning*”, **NeurIPS’23**.
- Y. Hu, **J. Liu***, A. Spielberg*, J. B. Tenenbaum, W. T. Freeman, J. Wu, D. Rus, W. Matusik, “*ChainQueen: A Real-Time Differentiable Physical Simulator for Soft Robotics*”, **ICRA’19**.
- X. Chen, E. Zhou, Y. Mo, **J. Liu**, Z. Cao, “*Delving Deep Into Coarse-to-Fine Framework for Facial Landmark Localization*”, **CVPR’17 Workshops**.

JOURNALS

- Y. Yao, X. Guo, V. Asnani, Y. Gong, **J. Liu**, X. Lin, X. Liu, S. Liu, “*Reverse Engineering of Deceptions on Machine- and Human-Centric Attacks*”, **Fnt’24**.
- X. Wu, R. L. Li, F. L. Zhang, **J. C. Liu**, J. Wang, A. Shamir, S. M. Hu, “*Deep Portrait Image Completion and Extrapolation*”, **TIP’20**.

PREPRINTS

- J. Liu***, C. Fan*, A. Hero, S. Liu, “*Challenging Forgets: Unveiling the Worst-Case Forget Sets in Machine Unlearning*”, arXiv, 2024.
- J. Jia, Y. Zhang, Y. Zhang, **J. Liu**, B. Runwal, J. Diffenderfer, B. Kailkhura, S. Liu, “*SOUL: Unlocking the Power of Second-Order Optimization for LLM Unlearning*”, arXiv, 2024.
- Y. Zhang, Y. Zhang, Y. Yao, J. Jia, **J. Liu**, X. Liu, S. Liu, “*UnlearnCanvas: A Stylized Image Dataset to Benchmark Machine Unlearning for Diffusion Models*”, arXiv, 2024.
- Y. Zhang*, J. Jia*, X. Chen, A. Chen, Y. Zhang, **J. Liu**, K. Ding, S. Liu, “*To Generate or Not? Safety-Driven Unlearned Diffusion Models Are Still Easy To Generate Unsafe Images ... For Now*”, arXiv, 2023.
- J. Liu***, Y. Yao*, Y. Gong*, X. Liu, Y. Wang, X. Lin, S. Liu, “*Can Adversarial Examples Be Parsed to Reveal Victim Model Information?*”, arXiv, 2023.
- J. Liu***, Y. Fang*, M. Zhang*, J. Zhang, Y. Ma, M. Li, Y. Hu, C. Jiang, T. Liu, “*Complex Locomotion Skill Learning via Differentiable Physics*”, arXiv, 2022.

HONORS & AWARDS

Scholar Award, NeurIPS'23	2023
Cloud Computing Fellowship, Michigan State University	2023
Gold Medal (11th place/364 teams), ACM-ICPC Asian Regional Contest	2017
Gold Medal (7th place/228 teams), ACM-ICPC Asian Regional Contest	2016
Science and Technology Innovation Fellowship, Tsinghua University	2016
Gold Medal (4th place/240 teams), China Collegiate Programming Contest (CCPC)	2015
Tsinghua Xuetang Program Fellowship, Tsinghua University	2015
Outstanding Freshman Fellowship, Tsinghua University	2015
Gold Medal (13th place/61,176 individuals), National Olympiad in Informatics (NOI), China	2014
— <i>Fifth place finalist over 50 awardees in International Olympiad Informatics (IOI) Chinese Team Selection</i>	

SERVICES & ACTIVITIES

Conference Activities

CVPR Tutorial — <i>Machine Unlearning in Computer Vision</i> [Link]	Seattle, Washington
<i>Student Co-organizer</i>	2024
ICML Workshop — <i>2nd AdvML Frontiers</i> [Link]	Honolulu, Hawaii
<i>Student Co-organizer</i>	2023
CVPR Tutorial — <i>Reverse Engineering of Deceptions</i> [Link]	Vancouver, Canada
<i>Student Co-organizer</i>	2023

Reviewer Activities

- **Conferences Reviewer:** ICML, CVPR, ECCV, AISTATS, ICASSP, CPAL
- **Journal Reviewer:** JCBC

Contributed Projects

- Taichi Lang ([taichi-dev/taichi](#))
— *Programming language for high-performance computation, 24k+ GitHub stars.*
- Universal Online Judge ([uoj.ac](#))
— *Online judging platform for competitive programming, 39k+ registered users.*

MENTORSHIP

Mr. Chongyu Fan	Visiting Student, MSU
<i>Undergraduate Student, Huazhong University of Science and Technology</i>	2023 - Present
— <i>Current graduate student at Michigan State University.</i>	
Mr. Juyuan Huang	Research Intern, MSU
<i>Undergraduate Student, Michigan State University</i>	2023 - Present
Mr. Orion Smith	Research Intern, MSU
<i>Computer Science teacher, East Lansing High School</i>	2023
— <i>Research Experiences for Teachers (RET) program for K-12 educators.</i>	
Mr. Jiashi Li	Software Engineer Intern, Taichi
<i>Undergraduate Student, Peking University</i>	2021 - 2022
— <i>Current software design engineer at High-Flyer Inc.</i>	

EXTRACURRICULAR ACTIVITIES

President , <i>Tsinghua Student A Cappella Club</i>	2018 - 2019
Baritone , <i>G-Sharp Student A Cappella Vocal Group</i>	2016 - 2021
Bass , <i>Tsinghua Chorus</i>	2016 - 2020

SKILLS

- Proficient in several programming languages, like Python, C, C++, CUDA, Java, HTML, PHP, etc.
- Familiar with ML frameworks and tools, like Pytorch, Tensorflow, Keras, HuggingFace, W&B, etc.