Jason Wang

📞 (703) 944-0640 | ✉ jasonwang1@college.harvard.edu | 🔗 jasonwang.app | ⬛ jsonW0 | in jasonwang292

EDUCATION

Harvard University <div align="right">Cambridge, MA</div>

A.B./S.M. in Computer Science and Mathematics   GPA 3.99/4.00   John Harvard Scholar (Top 5%)   May 2025

Coursework (∗ Graduate Level): Data Structures & Algorithms, Systems Programming, Theoretical CS, Probability, Inference, Unsupervised Learning, Reinforcement Learning, Linear Algebra, Supervised Research in AI, Deep Learning*, Interpretable ML*, Data Science*, Advanced Natural Language Processing*, Geometric ML*, Algorithmic Fairness*

TECHNICAL SKILLS

Programming: Python, C++, Java, JavaScript, MATLAB, Julia, R, SQL, Git
Machine Learning: PyTorch, TensorFlow, JAX, Multi-GPU Training, Transformers, OpenCV, sklearn, pandas
Web Development: React, Flask, AWS, MongoDB, Firebase, Dash, Tailwind, HTML/CSS

EXPERIENCE

Optiver <div align="right">Austin, TX</div>
HFT Research Intern <div align="right">June 2024-August 2024</div>
- Researched 40 well-motivated hypotheses to identify and trade new profitable products from historical data
- Ideated, simulated, and executed own trading strategies; actively click-traded on real markets

Harvard Geometric ML Lab <div align="right">Cambridge, MA</div>
Student Researcher <div align="right">September 2023-Present</div>
- Trained diffusion models, optimized linear regressions with manifold learning over 1M images to find scaling laws
- Invented new fairness notions for graph neural networks and a method to adjust the fairness-accuracy tradeoff

Harvard SAFR ML Lab <div align="right">Cambridge, MA</div>
Student Researcher <div align="right">March 2023-Present</div>
- Trained 12B parameter large language models with distributed multi-GPU computing units on AWS
- Invented novel adversarial attacks 2x more accurate than baseline, built complete Python package of >10k lines

MITRE <div align="right">McLean, VA</div>
Data Science Intern <div align="right">May 2023-August 2023</div>
- Designed ML algorithms for national security of critical infrastructure, developed data visualization app using Dash
- Reverse-engineered software using Ghidra, upskilling on embedded security and drone development

Orchard Robotics <div align="right">Ithaca, NY</div>
Software Engineer Intern <div align="right">June 2022-August 2022</div>
- Engineered full-stack data analytics pipeline from scratch with AWS and MongoDB, handled >15 TB of data
- Trained Mask R-CNN for machine vision in farm robotics with SageMaker, stereo depth estimation with OpenCV

ThinkCERCA <div align="right">Chicago, IL</div>
Automated Assistance Data Scientist <div align="right">January 2022-May 2022</div>
- Developed AI essay grader using large language models with PyTorch and Transformers, achieving 80% accuracy

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LEADERSHIP

Harvard Undergraduate Machine Intelligence Community <div align="right">Cambridge, MA</div>
Co-President <div align="right">September 2021-May 2024</div>
- Taught over 100 Harvard students deep learning, founded AI Project Incubator hosting 9 project groups

Conflux Art Tech: Musical Chairs <div align="right">Cambridge, MA</div>
Software Lead <div align="right">September 2022-May 2023</div>
- Innovated real-time audio feature extraction using OpenAI Whisper to compose generative music for arts festival

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SELECTED PUBLICATIONS

- B. Kiani, **J. Wang**, M. Weber, "Hardness of Learning Neural Networks under the Manifold Hypothesis", *Proceedings of the 38th International Conference on Neural Information Processing Systems **(NeurIPS-24 Spotlight).***
- M. Li*, **J. Wang***, J. Wang*, S. Neel, "Model Perturbation based Privacy Attacks on Language Models", *Proceedings of the 2023 Conference on Empirical Methods in Natural Language Processing **(EMNLP-23, NeurIPS SoLaR-23).***
- **J. Wang**, K. Fu, Z. Chen, C.T. Lu, "Augmentation of Chinese Character Representations with Compositional Graph Learning," *Proceedings of the Thirty-sixth AAAI Conference on Artificial Intelligence **(AAAI-22).***