Chenguang Wang

2201 Falls Gable Ln, Baltimore, MD | cwang274@jh.edu | 551-229-0484 | c-steve-wang.github.io/
linkedin.com/in/chenguang-wang-27461b230

Education

John Hopkins University, Graduate Visiting Scholar — Aug 2024 – Exp. May 2025

- Led research projects in LLM & MLLM
- Collaborate with scholars to advance innovative findings and publications

Stony Brook University, Ph.D. Civil Engineering — Jan 2023 – Exp. May 2026

- **GPA:** 3.92/4.0
- Researched in LLM for disaster-related information retrieval.

Stevens Institute of Technology, M.S. Computer Science — Aug 2021 – Jan 2023

- **GPA:** GPA: 3.88/4.0
- Engaged in multiple IoT research projects.
- **Course work**: Knowledge discovery & data mining, Artificial Intelligence, Applied Machine Learning

Xi'an Jiaotong University, B.S. Computer Science — Aug 2016 – June 2020

- Led student club and engaged in research activities.
- **Course work**: Data structure, Computer systems and architecture, Software engineering, Machine learning, Deep learning, Computer network, Introduction of Artificial Intelligence

Publications

Wang, C., Liu, Y., Zhang, X., Li, X., Paramygin, V., Subgranon, A., Sheng, P., Zhao, X., & Xu, S. (2023). *Causality-informed rapid post-hurricane building damage detection in large scale from In-SAR imagery*. In *Proceedings of the 8th ACM SIGSPATIAL International Workshop on Security Response using GIS* (pp. 7–12). https://doi.org/10.1145/3615884.3629422

Wang, C., Liu, Y., Zhang, X., Li, X., Paramygin, V., Sheng, P., Zhao, X., & Xu, S. (2024). *Scalable and rapid building damage detection after Hurricane Ian using causal Bayesian networks and InSAR imagery*. *International Journal of Disaster Risk Reduction, 104371*. https://doi.org/10.1016/j.ijdrr.2024.104371

Wang, C., Engler, D., Li, X., Hou, J., Wald, D. J., Jaiswal, K., & Xu, S. (2024). *Near-real-time earthquake-induced fatality estimation using crowdsourced data and large-language models*. *International Journal of Disaster Risk Reduction, 111*, 104680. https://doi.org/10.1016/j.ijdrr.2024.104680

Li, M., Chen, P., **Wang, C.**, Zhao, H., Liang, Y., Hou, Y., Liu, F., & Zhou, T. (2024). *Mosaic IT: Enhancing instruction tuning with data mosaics*. *arXiv preprint arXiv:2405.13326*. https://arxiv.org/abs/2405.13326

Wang, C., Li, M., Chen, H., Nguyen, D., Li, D., & Zhou, T. (2024). *RuleR: Improving LLM controllability by rule-based data recycling*. *arXiv preprint arXiv:2406.15938*. https://arxiv.org/abs/2406.15938

Experience

Research Assistant, John Hopkins University – Baltimore, MD — Aug 2024 – Present

- Lead a large language model (LLM) agent project that utilizes Chain-of-Thought (CoT) reasoning, Reinforcement Learning (RL), and instruction tuning to simulate human behavior in disaster evacuation scenarios.
- Analyze and model evacuee preferences to extract insights from questionnaire data, targeting a 10% increase in performance from current Statistic Machine Learning methods.

Research Assistant, Stony Brook University – Stony Brook, NY — Jan 2023 – Aug 2024

- Implemented LLM to extract vital information from real-time tweets and news articles during disasters and developed a Truth Discovery algorithm to verify the correctness, reducing processing time from days to under 2 hours with 96% accuracy.
- Benchmarked 10 state-of-the-art LLMs on inference and fine-tuning, demonstrating effectiveness and efficiency in information extraction.

Research Assistant, Stevens Institute of Technology – Hoboken, NJ Jan 2022 – Dec 2022

- Implemented the Robot Operating System (ROS) to control a drone, enabling it to navigate and fly within a room while capturing a 5-minute video of appliances during its route routinely.
- Constructed a detection system by fine-tuning YOLO v5 to identify appliances and states accurately, achieving 95% accuracy in the task.

Research Assistant, Xi'an Jiaotong University – Xi'an, China Feb 2020 – June 2021

- Implemented a gaze point tracking algorithm based on YOLO in a Python environment to determine screen coordinates in videos recorded by smart glasses.
- Developed a Python-based spatial transformation program to map video coordinates onto a physical monitor, achieving 98% accuracy in identifying user viewing points and offering deeper insights for simulation analysis.

Award

ECE Research Scholarship Award, Stevens Institute of Technology 2022

Provost Doctoral Fellowship, Stevens Institute of Technology 2022

Additional Information

- **Language**: English *(Proficient)*, Chinese *(Native)*.
- **Teaching Assistant**: Delivered lectures and evaluated homework and exams for two classes—75 students in an introductory course and 47 students in a machine learning course—ensuring smooth course execution and effective learning.
- **Vice leader of Network Security Club**: Led a 20+ member team, organizing workshops and competitions on network security.
- **Volunteer**: Assisted in packing and distributing over 1,000 meals for Haitian children in poverty after the Haitian Earthquake.