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Haoran Wang

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Research Interests

My research involves building trustworthy AI systems, with a specific emphasis on improving both robustness and interpretability. I am broadly interested in fundamental research and interdisciplinary collaborations motivated by important applications, including detecting misinformation and analyzing social networks.

Education

2022-Now **PhD, Computer Science**, *Illinois Institute of Technology*, Chicago, IL, USA.
Advisor: Dr. Kai Shu

2021 **MS, Computer Science**, *University of Oregon*, Eugene, Oregon, USA.
Advisor: Dr. Thien Huu Nguyen

2019 **BS, Computer Science**, *Purdue University*, West Lafayette, IN, USA.
Advisor: Dr. Yung-Hsiang Lu

Publications

[C5] ***Haoran Wang***, Aman Rangapur, Xiongxiao Xu, Yueqing Liang, Haroon Gharwi, Carl Yang, Kai Shu. Piecing It All Together: Verifying Multi-Hop Multimodal Claims. In *Proceedings of the 31st International Conference on Computational Linguistics (COLING)*.

[C4] ***Haoran Wang***, Kai Shu. Trojan Activation Attack: Red-Teaming Large Language Models using Steering Vectors for Safety-Alignment. In *Proceedings of the 33rd ACM International Conference on Information and Knowledge Management (CIKM)*.

[C3] Yue Huang, Lichao Sun, ***Haoran Wang***, Siyuan Wu, Qihui Zhang, Chujie Gao, et al. TrustLLM: Trustworthiness in Large Language Models. In *Proceedings of the Forty-first International Conference on Machine Learning (ICML)*.

[C2] ***Haoran Wang***, Kai Shu. Explainable Claim Verification via Knowledge-Grounded Reasoning with Large Language Models. In *Findings of the Association for Computational Linguistics: EMNLP 2023 (EMNLP-Findings)*.

[C1] ***Haoran Wang***, Yingtong Dou, Canyu Chen, Lichao Sun, Philip S. Yu, Kai Shu. Attacking Fake News Detectors via Manipulating News Social Engagement. In *Proceedings of the ACM Web Conference 2023 (WWW)*.

Preprints

[P4] ***Haoran Wang***, Kai Shu. Make Every Token Count: A Systematic Survey on Decoding Methods for Foundation Models. *Preprint 2025*.

[P3] Aman Rangapur, ***Haoran Wang***, Ling Jian, Kai Shu. Fin-Fact: A Benchmark Dataset for Multimodal Financial Fact Checking and Explanation Generation. *Preprint 2023*.

[P2] Aman Rangapur, ***Haoran Wang***, Kai Shu. Investigating Online Financial Misinformation and Its Consequences: A Computational Perspective. *Preprint 2023*.

[P1] Canyu Chen, ***Haoran Wang***, Matthew Shapiro, Yunyu Xiao, Fei Wang, Kai Shu. Combating Health Misinformation in Social Media: Characterization, Detection, Intervention, and Open Issues. *Preprint 2022*.

Research Experience

Fall 2022 – May 2024 ***Graduate Research Assistant***, *Illinois Institute of Technology*, Chicago, IL.
- Advisor: Dr. Kai Shu
- Project: **GUISE**, sponsored by *Charles River Analytics, DARPA*.
- Developed systems to extract information flows on social media using a hierarchical template approach.

Fall 2021 – Summer 2022 ***Graduate Research Assistant***, *Montana State University*, Bozeman, MT.
- Advisor: Dr. Laura Stanley
- Project: **iPAL**, sponsored by *NSF* and *NIH*.
- Developed an ecosystem of mobile, wearable health monitoring devices, and AR/VR/MR devices to provide cognitive behavioral therapy as an intervention for users with opioid use disorder (OUD).
- Developed immersive biofeedback breathing exercise on Vuzix Blade AR glasses and Microsoft HoloLens 2 MR glasses that can process PPG(BVP) signal in real-time.

Fall 2018 – Spring 2019 ***Undergraduate Research Assistant***, *Purdue University*, West Lafayette, IN.
- Advisor: Dr. Yung-Hsiang Lu
- Project: **CAM2**, sponsored by *NSF*.
- Evaluated different solutions to Big Data storage problem of unstructured data.
- Built a distributed database to store images and videos along with their metadata captured by network cameras around the globe.

Fellowships & Awards

2022 🏆 **Provost Doctoral Fellowship**, Stevens Institute of Technology

2021 🏆 **Benjamin Fellowship**, Montana State University

2019 🏆 **Semester Honor Student**, Purdue University

Open-source Software

TrustLLM (contributor): Trustworthy LLM Benchmark and Toolkit, (400+ Github ⭐)

Fin-Fact (contributor): Multimodal Financial Fact-Checking Dataset, (Benchmark dataset for shared task at Financial Misinformation Detection workshop at COLING 2025)

Teaching Experience

CS 585: Natural Language Processing, *October 26, 2023*, Illinois Institute of Technology.
Guest Lecturer

CS 211: Computer Science I, *Spring 2020, Winter 2021, Spring 2021*, University of Oregon.
Graduate Teaching Assistant

CS 212: Computer Science II, *Fall 2020*, University of Oregon.
Graduate Teaching Assistant

Academic Service

Session Chair: CIKM 2024

Reviewer/Program Committee: AAAI {2024, 2025}, KDD {2024, 2025}, PAKDD{2025}

Student Volunteer: ACM FAccT 2023

External Reviewer: SIGIR {2023, 2024}, WSDM{2023}, ICDM{2023}, PAKDD{2024, 2025}, SDM{2025}

Mentoring

Aman Rangapur, IIT MS student → Solutions Architect, Allen Institute for AI (Ai2)

Technical Skills

Programming languages: Python, Java, C, C++, C#, JavaScript, SQL, Bash, R, Julia
Deep learning frameworks: PyTorch, Hugging Face Transformers, PyTorch Geometric
HPC: CUDA, OpenMP, MPI
Software: Linux, Git, Google Cloud Computing, LaTeX