Haoran Wang

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🌐 *Homepage*
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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 network.

Education

Present **PhD, Computer Science**, *Illinois Institute of Technology*.
Advisor: Dr. Kai Shu

2022 **MS, Computer Science**, *University of Oregon*.
Advisor: Dr. Thien Huu Nguyen

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

Preprints

Haoran Wang, Kai Shu. **Backdoor Activation Attack: Attack Large Language Models using Activation Steering for Safety-Alignment**. *Preprint 2023*.

Yue Huang, *Haoran Wang*, Lichao Sun. **TrustLLM: A Benchmark and Principles for Trustworthiness in Large Language Models**. *Preprint 2023*.

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

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

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*.

Publications

Haoran Wang, Kai Shu. **Explainable Claim Verification via Knowledge-Grounded Reasoning with Large Language Models**. *Findings of EMNLP2023*.

Haoran Wang, Yingtong Dou, Canyu Chen, Lichao Sun, Philip S. Yu, Kai Shu. **Attacking Fake News Detectors via Manipulating News Social Engagement**. *ACM Web Conference 2023*.

Haoran Wang, Thien Huu Nguyen. **Evaluating a Joint Neural Model with Global Features for Document-Level End-to-End Information Extraction**. *MS Thesis 2021*.

Research Experience

Fall 2022 – Present
Graduate Research Assistance, *Illinois Institute of Technology*, Chicago, IL.
- Advisor: Dr. Kai Shu
- Project: **GUISE**, sponsored by *Charles River Analytics, DARPA*.
- Developed systems to collect Twitter, Weibo, and Reddit related to several geopolitical events such as COVID-19, Prigozhin plane crash, and South China Sea. Provided data analysis and visualization to model information flow.

Fall 2021 – Summer 2022
Graduate Research Assistance, *Montana State University*, Bozeman, MT.
- Advisor: Dr. Laura Stanley
- Project: **iPAL**, sponsored by *NSF* and *NIH*.
- Developed a ecosystem of mobile, wearable health monitoring device, and AR/VR/MR device 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 Assistance, *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

Teaching Assistantship

CS 210: Computer Science I, *Spring 2020, Winter 2021, Spring 2021*, University of Oregon.
Graduate Teaching Assistant

CS 211: Computer Science II, *Fall 2020*, University of Oregon.
Graduate Teaching Assistant

Academic Service

Program Committee: AAAI 2024

Student Volunteer: ACM FAccT 2023

Reviewer: SIGIR 2022, WWW {2023, 2024}, TKDE 2023

External Reviewer: EMNLP 2023, ACL 2023, NIPS 2023

Mentoring

Aman Rangapur, IIT MS student

Hans Guttormsen, IIT UG student

Technical Skills

Programming languages: C, C++, Python, Java, C#, JavaScrip, R, Julia

Deep learning frameworks: PyTorch, Hugging Face Transformers, PyTorch Geometric

HPC: CUDA, OpenMP, MPI

Software: Linux, Git, Google Cloud Computing, LaTeX