College of Computing
Illinois Institute of Technology
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Homepage
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Haoran Wang

Research Interests

My research focuses on developing trustworthy systems to retrieve, extract, and verify natural language information. I am motivated by detecting misinformation and its associated research goals, including: graph representation learning, knowledge extraction, explainable natural language processing, and learning from weak or distant supervision.

Education

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

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

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

Publications

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*.

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*.

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: Kai Shu
- Project: GUISE, sponsored by *Charles River Analytics*.
- Developed systems to collect Twitter and Weibo related to several geopolitical events such as COVID-19 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: Laura Stanley
- Project: iPAL, sponsored by *NSF* and *NIH*.
- Developed a mobile system for users with opioid use disorder (OUD) to provide cognitive behavioral therapy as an intervention to reduce opioid craving.
- Developed immersive biofeedback breathing exercise on Vuzix Blade AR glasses and Microsoft HoloLens 2 MR glasses as an intervention to reduce opioid craving.

Fall 2018 – Spring 2019 ***Undergraduate Research Assistance***, *Purdue University*, West Lafayette, IN.
- Advisor: 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

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

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

Mentoring

2023 Aman Rangapur, IIT MS student

Technical Skills

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

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

Software: Linux, Git, Google Cloud Computing, LaTeX, CUDA programming