Chenguang Wang

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https://c-steve-wang.github.io/

EDUCATION

Ph.D. Civil Engineering, Stony Brook University — Jan 2023–Present

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

B.S. Computer Science, Xi'an Jiaotong University — Sep 2016–Jun 2020

EXPERIENCE

Doctoral Student, Stony Brook University, Department of Civil Engineering — Jan 2023 – Present
Supervised by Prof. Susu Xu on Disaster Response
- Investigate the application of advanced Large Language Models in disaster response, specifically focusing on the integration of crowd-sensing data to augment real-time situational awareness.
- Develop and implement sophisticated AI technologies to enhance disaster management strategies, focusing on improving response efficiency and risk assessment in various disaster scenarios.

Research Assistant, Analytics and Information Security Lab — March – Dec 2022
Supervised by Prof. Xiaojiang Du on IoT Security
- Construct an autonomous drone system for the surveillance of smart home devices to detect unauthorized state alterations signaling potential security breaches.
- Implement advanced detection algorithms on drones for real-time monitoring of home IoT devices, focusing on identifying irregular activities in their operational states.

Research Assistant, MoE Key Lab for Intelligent Networks & Network Security — Feb 2020 – Jun 2021
Supervised by Prof. Zhongmin Cai on Cyber-Physical System
- Implemented YOLO for gaze tracking on screens via smart glasses data, thereby enabling precise identification of user viewing points and interactions in video simulations for academic insights.

AWARDS

ECE Research Scholarship Award, Analytics and Information Security Lab — 2022

Provost Doctoral Fellowship, Stevens Institute of Technology — 2022

COMPETENCES

Languages Chinese (*native*), English (*proficient*)
Techniques Python, Matlab, C/C++, Linux, git, HTML/CSS/Javacript, LaTeX, PyTorch, QGIS

PUBLICATIONS

[1] **Wang, C.**, Liu, Y., Zhang, X., Li, X., Paramygin, V., Subgranon, A., Sheng, P., Zhao, X., Xu, S. "Causality-informed Rapid Post-hurricane Building Damage Detection in Large Scale from InSAR Imagery." In *Proceedings of the 8th ACM SIGSPATIAL International Workshop on Security Response using GIS 2023*, pp. 7-12, 2023. https://doi.org/10.1145/3615884.3629422

[2] Alami, M., Gunay, S., Mosalam, K., Vargas, L., Hassan, W., Merino-Peña, Y., Burton, H., Alhawamdeh, B., Lahna, T., Xu, S., Marinkovic, M., Archbold, J., Iturburu, L., Martin, A., Bektas, N., Ceferino, L., Duran, B., Nobahar, M., Romão, X., **Wang, C.**, Zhou, G., Zaoui, A., Kijewski-Correa, T. "StEER: Oukaïmedene Morocco Preliminary Virtual Reconnaissance Report (PVRR)", in *StEER 2023 Oukaïmedene Morocco Earthquake*, DesignSafe-CI, 2023. https://doi.org/10.17603/ds2-gw0j-6757

[3] **Wang, C.**, Engler, D., Li, X., Hou, J., Wald, D.J., Jaiswal, K., Xu, S. "Near-real-time Earthquake-induced Fatality Estimation using Crowdsourced Data and Large-Language Models." In *arXiv preprint arXiv:2312.03755*, 2023. https://arxiv.org/abs/2312.03755

[4] **Wang, C.**, Liu, Y., Zhang, X., Li, X., Paramygin, V., Sheng, P., Zhao, X., Xu, S. "Scalable and Rapid Building Damage Detection after Hurricane Ian using Causal Bayesian Networks and InSAR Imagery." In *International Journal of Disaster Risk Reduction*, 104371, 2024. https://doi.org/10.1016/j.ijdrr.2024.104371