JULIA HSIN-PING HSU

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My professional goal is to enhance the democratic and equitable nature of civic technologies through the application of innovative data science techniques and AI-assisted research.

Education

George Mason University — VA, USA
Ph.D. in Information Technology — 2020–Present

George Mason University — VA, USA
M.S. in Computer Science — 2018–2020

University of Taipei — Taipei, Taiwan
B.S. in Computer Science — 2013–2017

Southwestern Oklahoma State University — OK, USA
Exchange Program in Computer Science with Study Abroad Scholarship — 2015–2016

Professional Experience

George Mason University — VA, USA
Graduate Research Assistant — Nov. 2019–Present

- ML/ AI for social good
- Computational community data analytics
- ML algorithm implementation
- Map-based visualization system development

Virginia Academy of Science, Engineering, and Medicine — VA, USA
COVES Fellow at the State Council of Higher Education for Virginia — May 2024–Aug. 2024

- Ethics-based analysis of AI use in higher education

MYGUARD Company Limited — Taoyuan, Taiwan
Software Engineer — June 2017 –July 2018

- Developed and improved iOS and Android Apps for international medical foundation and increased 16% of downloads in one year
- Used Python to analyze and generate usage report of Apps to help the medical foundation spread medical knowledge

Dept. of Computer Science, University of Taipei — Taipei, Taiwan
Teaching Assistant — Spring 2017

- Provided feedback and instructions to 50 students on Java and Python programming assignments

Publications

[1] Lee, M., & Hsu, J. H.-P. (2024). An Evaluation of GPT-4V for Transcribing the Urban Renewal Hand-Written Collection. *Digital Humanities (DH '24)*.

[2] Hsu, J. H.-P., Shin, H., Park, N., & Lee, M. (2023). Two-sided Cultural Niches: Topic Overlap, Geospatial Correlation, and Local Group Activities on Event-based Social Networks. *Proceedings of the 11th International Conference on Communities and Technologies*, 54–63. https://doi.org/10.1145/3593743.3593758

[3] Hsu, J. H.-P., Wang, J., & Lee, M. (2022). Towards an Expectation-Oriented Model of Public Service Quality: A Preliminary Study of NYC 311. *International Conference on Social Informatics*, 447–458. https://doi.org/10.1007/978-3-031-19097-1_31

Awards and Honors

- 3rd-Place Prize at the GMU College of Engineering and Computing Innovation Week Poster Competition 2024
- GRA award from GMU's Center for Advancing Human-Machine Partnership (CAHMP) 2023
- GMU University International Travel Grant from Associate Provost for Graduate Education 2022
- Winner of Wells Fargo Campus Analytics Challenge – NLP and Topic Modeling 2020
- Outstanding Achievement Award by Taipei City Council for 4 academic years 2013–2017
- Winner of the University of Taipei Social Network Design Competition 2017
- First Oklahoma High Performance Computing Competition Honorable Mention 2015
- Oklahoma Supercomputing Symposium Participant 2015
- University of Taipei High Scholar Achievement Award for 4 consecutive years 2013–2017
- Winner of the University of Taipei Software Creative Design Competition 2013

Participation in Funded Projects

Mapping Information Ecology: Understanding the Fragmentation of Disability Service Information
Funded by Virginia Board for People with Disabilities & U.S. Department of Health and Human Services 2023–Present

- Co-author of the grant proposal
- Participate as a graduate research assistant
- Design and implement computational network analysis on information providers

Exploring How Convergence Methods Foster Shared Accountability to Reveal, Map, and Mitigate the Sources and Dynamics of Bias across Social Service Provisioning Systems
Funded by NSF DASS Program 2023–Present

- Participate as a graduate research assistant

AI for AI: Toward Community-level Human-AI Collaborations in Local Meetups
Funded by 4VA @Mason 2021–2022

- Participated as a graduate research assistant
- Implemented Machine Learning algorithms

Making Information Deserts Visible: Computational Models, Disparities in Civic Technology Use, and Urban Decision Making
Funded by NSF HCC Program 2020–2022

- Participated as a graduate research assistant
- Led the web visualization system development team

Professional Service

- **Student Volunteer**, RecSys 2022 2022
- **Reviewer**, SocInfo 2022 2022

Technical Skills

- **Programming Languages/ Databases:** Python, C, C++, Java, SQL, MongoDB, Spark, MATLAB, HTML, CSS, JavaScript, VHDL, Assembly Language
- **Frameworks/ Other:** Django, Angular, Jenkins, Amazon Web Services, RESTful Web Service (Jersey), React, Rancher, Docker, Android Studio, Google Cloud, Git