Srishti Gupta, Ph.D.

318, Massry School of Business, University at Albany, SUNY, Albany, NY 12206

□ +1 814 826 5117 • ⊠ sgupta4@albany.edu Sites.google.com/view/srishtigupta/home

Education

Pennsylvania State University	University Park, PA
• Doctor of Philosophy (Ph.D.) in Information Science and Technology Advisor: John M. Carroll	2017–2023
Vellore Institute of Technology	Chennai, India
^o Master of Science (5 year Integrated Program) in Software Engineering	2011–2016
Academic Appointments	
University at Albany, SUNY	Albany, NY
^o Visiting Assistant Professor	August 2024-Present

- Design and teach master's level courses in data science, AI, and human-computer interaction focusing on applied project-based learning.

University of Nebraska Omaha

0 Research Scholar

September 2023-August 2024 - Conducted human-centered AI research, leading the design and development of large language models (LLMs) to support communication in healthcare for neonatal Hypoxic-Ischemic Encephalopathy (HIE) and empower tribal emergency management in Indigenous communities.

- Pennsylvania State University 0
 - Graduate Teaching Fellow

University Park, PA

Remote

January 2021-December 2021

- Independently designed and taught undergraduate courses in Human-Centered Design.

Courses Taught

- o BFOR515: Tools for AI and Data Analytics (Fall 2024): Master's level course covering R and Python programming in the context of data science, focusing on real-world business applications.
- o IST 331: Foundations of Human-Centered Design (Spring 2021, Fall 2021): Undergraduate course on design principles and human-computer interaction with a project-based approach.

Publications

- 1. Vadapalli, J., **Gupta, S.**, Karki, B., & Tsai, C.H. (2024). Incorporating Citizen-Generated Data into Large Language Models. In *Proceedings of the 25th Annual International Conference on Digital Government Research* (pp. 1023-1025).
- Chandrasekar, H., Gupta, S., Liu, C.T., & Tsai, C.H. (2024). Leveraging Large Language Models for Effective Organizational Navigation. In *Proceedings of the 25th Annual International Conference on Digital Government Research* (pp. 1020-1022).
- Gupta, S., & Tsai, C.H. (2024). Utilizing Large Language Models in Tribal Emergency Management: A Qualitative Study. In Companion Proceedings of the 29th International Conference on Intelligent User Interfaces (pp. 1-6).
- 4. **Gupta, S.**, Jablonski, J., Tsai, C. H., & Carroll, J. M. (2022). Instagram of Rivers: Facilitating Distributed Collaboration in Hyperlocal Citizen Science. *Proceedings of the ACM on Human-Computer Interaction*, 6(CSCW1), 1-22.
- 5. Carroll, J. M., Gui, F., **Gupta, S.**, & Knearem, T. (2022). Playful Meaning-Making as Prosocial Fun. *Future Internet*, 14(10), 288.
- 6. **Gupta, S.**, Tsai, C.H.,& Carroll, J.M. (2022). Not Another Day Zero: Design Hackathons for Community Based Water Quality Monitoring. *arXiv preprint arXiv:2210.16381*.
- Gupta, S., Dhanorkar, S., & Carroll, J. (2021, June). Not in my Backyard!? Lessons from a Community Conflict. In C&T'21: Proceedings of the 10th International Conference on Communities & Technologies-Wicked Problems in the Age of Tech (pp. 234-244).
- 8. Carroll, J. M., Beck, J., Boyer, E. W., Dhanorkar, S., & **Gupta, S.** (2019). Empowering Community Water Data Stakeholders.*Interacting with Computers*, *31*(3), 492-506.
- 9. Carroll, J. M., Beck, J., Dhanorkar, S., Binda, J., **Gupta, S.**, & Zhu, H. (2018, May). Strengthening Community Data: Towards Pervasive Participation. In *Proceedings of the 19th Annual International Conference on Digital Government Research: Governance in the Data Age* (pp. 1-9).
- Wang, X., Knearem, T., Gui, F., Gupta, S., Zhu, H., Williams, M., & Carroll, J. M. (2018, May). The Safety Net of Aging in Place: Understanding How Older Adults Construct, Develop, and Maintain Their Social Circles. In *Proceedings of the 12th EAI International Conference on Pervasive Computing Technologies for Healthcare* (pp. 191-200).
- 11. Wang, X., Knearem, T., Gui, F., **Gupta, S.**, Zhu, H., Williams, M., & Carroll, J. M. (2018, April). A Safety Net: How Older Adults Build and Maintain Interpersonal Relationships. In *Extended Abstracts of the 2018 CHI Conference on Human Factors in Computing Systems* (pp. 1-6).
- 12. **Gupta, S.**, Mustafa, S. Z., & Kumar, H. (2017). Smart People for Smart Cities: A Behavioral Framework for Personality and Roles. In *Advances in Smart Cities* (pp. 35-42). Chapman and Hall/CRC.
- 13. **Gupta, S.**, & Sinha, S. (2016). Contemplating 'Smart Cities' beyond Technology. In *Sixteenth Global Conference on Flexible Systems Management*
- 14. Chaturvedi, M., & Gupta, S. (2015, June). International Cooperation to Enhance Website Security. In

10th Annual Symposium on Information Assurance (ASIA'15) (p. 28).

Manuscripts Under Review

- 1. **Gupta, S.**, & Tsai, C.H. (2024). Co-Design for Preserving Indigenous Culture in Large Language Models [manuscript under review at ACM CSCW 2025]
- 2. **Gupta, S.**, Carroll, J.M., & Tsai, C.H. (2024). Distance Matters in Field-Based Citizen Science. [manuscript under review at ACM CSCW 2025].

Manuscripts Under Preparation

1. **Gupta, S.**, Kim, J., Lin, Y.F., & Carroll, J.M. (2024). Design Space Analysis of Water Quality Monitoring Applications. [manuscript under preparation].

Professional Experience

Healthcare Innovation and Technology Lab (HITLAB)

- UX Researcher
 - Design, implement, and manage various digital health studies assessing a variety of innovative healthcare tools such as AI-powered labor assisting devices, wearables, and telemedicine.
 - Manage and implement mixed-method research studies, including surveys, interviews, experiments, and think-aloud sessions.

IBM Research

Summer Research Intern

- Spearheaded a research study within the Accelerated Materials Discovery (AMD) research group, focusing on uncovering barriers in knowledge-dense interdisciplinary research, specifically in AMD and AI integration.
- Contributed to improving algorithm explainability by introducing novel scenario-based design and employing GPT as boundary objects, addressing conceptual translation challenges within interdisciplinary research groups.
- Used methods such as participatory design, scenario-based design, and interviews.

Indian Institute of Technology Delhi

Graduate Research Intern

- Led a comprehensive research study analyzing Twitter analytics concerning web design accessibility, uncovering a lack of awareness about accessibility guidelines among web designers.
- Developed a conceptual framework aimed at bridging this gap and increasing awareness of web accessibility guidelines among web designers.

Talks

Conference and Poster Presentations

- "Utilizing Large Language Models in Tribal Emergency Management"
 ACM IUI Conference, March 2024
- o "Conceptual Translation Problems in Cross-Functional Materials Discovery Teams"

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June 2021-August 2021

New Delhi, India

January 2016–May 2016

Remote October 2023-August 2024

Remote

- American Chemical Association (ASC), Fall 2023: Harnessing the Power of Data, August, 2023
- o "Citizen Science for Public Health"
 - HITLAB's 2023 Innovators Summit: The Promise & Potential of Digital Health, June 2023
- o "Facilitating Inter-Group Collaboration in Field-Based Citizen Science"
 - Penn State Graduate School Exhibition, March 2023
- "Instagram of Rivers: Facilitating Distributed Collaboration in Hyperlocal Citizen Science"
 ACM CSCW Conference, November 2022
- o "Not in my Backyard!? Lessons from a Community Conflict"
 - ACM C&T Conference, June 2021
- o "International Cooperation to Enhance Website Security"
 - Annual Symposium on Information Assurance (ASIA'15), July 2015

Invited Seminars

- "From Silos to Synergy: Enabling Distributed Collaboration in Citizen Science Water Quality Monitoring"
 - University of Nebraska Omaha, September 2023
- o "Women's Health Tech Wednesday"
 - HITLAB, May 2023
- "AI in Interdisciplinary Research: Case of Accelerated Materials Discovery"
 IBM Research, March 2023
 - IBM Research, March 2023
- "Introduction to the 'Water Data Collaborative' platform"
 Spring Creek Watershed Commission, May 2022
- o "Facilitating distributed collaboration in community-based water monitoring groups"
 - Lake Stewards of Maine, September 2022

Student Advising

- o (2024) Jagadeesh Vadapalli, Masters student in Department of Information Systems and Quantitative Analysis, University of Nebraska Omaha
 - Project: "Incorporating Citizen-Generated Data into Large Language Models"
 - · Mentored in data analysis and technical writing.
 - · Co-authored a poster paper that was accepted at ACM DGO 2024.
- (2024) Gargi Nandy, second-year Ph.D. student in Department of Information Systems and Quantitative Analysis, University of Nebraska Omaha
 - Project: "Enhancing Family Support for Neonatal Hypoxic-Ischemic Encephalopathy Through a Language Model Application"
 - $\cdot\,$ Mentored in study design, data collection, data analysis and technical writing.
- o (2024) Haresh Chandrasekar, Undergraduate student in Department of Information Sys-

tems and Quantitative Analysis, University of Nebraska Omaha

- Project: "Leveraging Large Language Models for Effective Organizational Navigation"
 - · Mentored in data analysis and technical writing.
 - $\cdot\,$ Co-authored a poster paper that was accepted at ACM DGO 2024.
- (2023) Tejesvi Sreeramdas, Masters student in Department of Information Systems and Quantitative Analysis, University of Nebraska Omaha
 - Project: "Design of LLM's for Tribal Emergency Management"
 - · Mentored in data collection, interview protocol design, data analysis, and technical writing.
- o (2022) Jiyoon Kim, first-year Ph.D. student in College of Information Science and Technology, Penn State
 - Project: "Design Space Analysis of Citizen-Based Water Quality Monitoring Applications"
 - · Mentored in data collection, systematic review, data analysis, and technical writing.
 - · Co-authored a research paper which is under preparation
 - Project: "Misinformation in Local Community"
 - · Mentored in the design of the interview protocol, qualitative data analysis, and technical writing.
 - · Co-authored a research paper that is under review at ACM CSCW 2024.
- (2022) Ya-Fang Lin, first-year Ph.D. student in College of Information Science and Technology, Penn State
 - Project: "Design Space Analysis of Citizen-Based Water Quality Monitoring Applications"
 - · Mentored in data collection, systematic review, data analysis, and technical writing.
 - · Co-authored a research paper that is under preparation.
- (2020) Julia Jablonski, undergraduate majoring in Computer Science and Engineering, Penn State
 - Project: "Facilitating Inter-Group Collaboration in Citizen Science"
 - · Mentored in data transcription, qualitative data analysis, and technical writing.
 - · Co-authored a research paper that was published in ACM CSCW 2022.
- o (2019) Yaxi Liu, undergraduate majoring in Computer Science and Engineering, Penn State
 - Project: "Designing Hackathons for Community-Based Water Quality Monitoring"
 - · Mentored on prototype development for a participatory design study and qualitative data analysis.

Academic Service

- o Program Committee for CHI Late-Breaking Work (LBW) 2024
- o Associate Chair for ACM CSCW Poster 2023
- Program Committee member for ACM C&T 2023
- External paper reviewer:
 - 2024: CSCW, RecSys
 - 2023: CHI Full Paper and LBW, CSCW, DIS, INTERACT
 - 2022: CSCW

- 2021: CSCW, CHI LBW, INTERACT
- 2020: CSCW, CHI, NordiCHI
- 2019: CSCW, DIS, INTERACT
- o Selected to participate in CRA URMD Grad Cohort, 2019

Skills

- **Research Methods:** Interviews, Observation/Ethnography, Participatory Design Research, Scenario-Based Design, Focus Groups, Surveys, Personas, Contextual Inquiry, Usability Testing, Heuristic Evaluation, Summative and Formative Evaluation, Workshops, Card Sorting, Journey Maps, Storyboarding, UML, Software Prototyping
- **Tools and Programming Skills:** Adobe Xd, Figma, NVivo, QDA Miner, R, Python, SPSS, Minitab, HTML, CSS
- Project Management: Design Thinking, Agile UX, SCRUM, Slack

Awards and Honors

- o 2022: IST Graduate Student Travel Grant, Penn State University
- o 2021: Performance Award, IBM Research
- o 2021: Graduate Teaching Fellowship (Spring & Fall 2021), College of IST, Penn State University
- o 2015: Star of the Week Accolade for extraordinary performance in projects and presentations, HITLAB

References

- Dr. John M. Carroll (Advisor) Distinguished Professor College of Information Science and Technology Pennsylvania State University jmc56@psu.edu
- Dr. Mary Beth Rosson (Referee 1) Professor College of Information Science and Technology Pennsylvania State University mrosson@psu.edu
- Dr. Andrea Tapia (Referee 2) Professor
 College of Information Science and Technology Pennsylvania State University axh50@psu.edu
- Dr. Chun-Hua Tsai (Referee 3)

Assistant Professor Department of Information Systems and Quantitative Analysis University of Nebraska Omaha chunhuatsai@unomaha.edu