

Vedant Das Swain

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I study approaches to enhance worker mental health with cutting-edge AI applications. I aim to identify responsible and human-centered ways to deploy such frameworks in the workforce to inform personal insights, personnel management and data-driven policymaking.

Education

- 2018 - 2023 **Ph.D., Computer Science**
Georgia Institute of Technology
Committee: Prof. Munmun De Choudhury (co-chair), Prof. Gregory D. Abowd (co-chair), Prof. Sauvik Das, Prof. Thomas Plötz, Prof. Anind K. Dey, and Dr. Shamsi T. Iqbal
PhD Dissertation: *Passive Sensing Frameworks for the Future of Information Workers*
- 2016 - 2018 **MS, Human-Computer Interaction**
Georgia Institute of Technology
Advisors: Prof. Gregory D. Abowd and Prof. Thomas Plötz
Masters Project: *Spare a Thought: Understanding Interruptibility of Reflective EMAs*
- 2012 - 2016 **BTech, Computer Science & Engineering**
Indraprastha Institute of Information Technology, Delhi (IIIT-Delhi)

Experience

- 2023 - Present **Distinguished Postdoctoral Fellow**, Northeastern University
Researching AI applications to improve the wellbeing for information work, emotional labor, and neurodiverse job seekers. Leading a collaboration with Microsoft on a pilot grant to design empathetic AI-coworkers for front office service. Leading a pilot grant from NIH/NIDA to study human-in-the-loop approaches to mental health sensing.
- May - Aug 2022 **Research Intern**, Microsoft Research Redmond
Mentors: Dr. Mary Czerwinski and Dr. Javier Hernandez
Studied activities of 35 information workers when they protect time for themselves during remote work. Conducted a randomized control trial of 100 information workers to understand the effects of time protection interventions on overall wellbeing outcomes of workers.
- May - Aug 2021 **Research Intern**, Microsoft Research Redmond
Mentors: Dr. Shamsi Iqbal and Dr. Adam Fourney
Studied the integration of smartphones in a remote worker's daily work practices. Conducted a survey of 100 workers and a field deployment with device logging for 23 workers to characterize the smartphone practices.

- May - Aug 2020 **Graduate Student Instructor**, Georgia Institute of Technology
 Course: CS-3750, User Interface Design
 Taught a class of 45 students the fundamentals of user-centered design, requirements gathering methods, prototyping methods, and evaluation methods. Mentored the students to take data-driven decisions and develop functional prototypes.
- 2017 - 2022 **Graduate Research Assistant**, Georgia Institute of Technology
 Analyzed behaviors of information workers and university population by processing their behavioral traces with off-the-shelf technologies. Led multiple research efforts into publishable work, presented at venues like CHI, CSCW, and Ubicomp.
- May - Dec 2017 **UX Engineer Intern**, Siemens Healthineers
 Engineered reusable UI components to support the construction of Clinical Decision Support (CDS) apps and other medical imaging technology interfaces, designed to be used by radiologists. Applications were showcased at RSNA 2017.

Publications

Refereed Conference Proceedings

- [C1] **V. Das Swain**, Q. Zhong, J. R. Parekh, Y. Jeon, R. Zimmerman, M. Czerwinski, J. Suh, V. Mishra, K. Saha, J. Hernandez, et al. “AI on My Shoulder: Supporting Emotional Labor in Front-Office Roles with an LLM-based Empathetic Coworker”. In: CHI '25 (2025). DOI: 10.1145/3706598.3713705.
- [C2] **V. Das Swain** and K. Saha. “Teacher, Trainer, Counsel, Spy: How Generative AI Can Bridge or Widen the Gaps in Worker-Centric Digital Phenotyping of Wellbeing”. In: *Proceedings of the 3rd Annual Meeting of the Symposium on Human-Computer Interaction for Work*. CHIWORK '24. New York, NY, USA: Association for Computing Machinery, 2024, pp. 1–13. DOI: 10.1145/3663384.3663401.
- [C3] **V. Das Swain**, L. Gao, A. Mondal, G. D. Abowd, and M. De Choudhury. “Sensible and Sensitive AI for Worker Wellbeing: Factors That Inform Adoption and Resistance for Information Workers”. In: *Proceedings of the 2024 CHI Conference on Human Factors in Computing Systems*. CHI '24. New York, NY, USA: Association for Computing Machinery, 2024, pp. 1–30. DOI: 10.1145/3613904.3642716.
- [C4] A. Choube, **V. Das Swain**, and V. Mishra. “SeSaMe: A Framework to Simulate Self-Reported Ground Truth for Mental Health Sensing Studies”. In: *Proceedings of the 12th International Conference on Affective Computing and Intelligent Interaction*. ACII '24. 2024. DOI: 10.48550/arXiv.2403.17219.
- [C5] **V. Das Swain**, L. Gao, W. A. Wood, S. C. Matli, G. D. Abowd, and M. De Choudhury. “Algorithmic Power or Punishment: Information Worker Perspectives on Passive Sensing Enabled AI Phenotyping of Performance and Wellbeing”. In: *Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems*. CHI '23. New York, NY, USA: Association for Computing Machinery, 2023, pp. 1–17. DOI: 10.1145/3544548.3581376.

- [C6] **V. Das Swain**, J. Hernandez, B. Houck, K. Saha, J. Suh, A. Chaudhry, T. Cho, W. Guo, S. Iqbal, and M. P. Czerwinski. “Focused Time Saves Nine: Evaluating Computer-Assisted Protected Time for Hybrid Information Work”. In: *Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems*. CHI ’23. New York, NY, USA: Association for Computing Machinery, 2023, pp. 1–18. DOI: 10.1145/3544548.3581326.
- [C7] **V. Das Swain**, S. Williams, A. Fourney, and S. T. Iqbal. “Two Birds with One Phone: The Role of Mobile Use in the Daily Practices of Remote Information Work”. In: *Proceedings of the 1st Annual Meeting of the Symposium on Human-Computer Interaction for Work*. CHIWORK ’22. New York, NY, USA: Association for Computing Machinery, 2022, pp. 1–8. DOI: 10.1145/3533406.3533416.
- [C8] **V. Das Swain**, V. Chen, S. Mishra, S. M. Mattingly, G. D. Abowd, and M. De Choudhury. “Semantic Gap in Predicting Mental Wellbeing through Passive Sensing”. In: *Proceedings of the 2022 CHI Conference on Human Factors in Computing Systems*. CHI ’22. New York, NY, USA: Association for Computing Machinery, 2022, pp. 1–16. DOI: 10.1145/3491102.3502037.
- [C9] K. Hall, D. W. Yoo, W. Zhang, M. Bin Morshed, **V. Das Swain**, G. D. Abowd, M. De Choudhury, A. Endert, J. Stasko, and J. G. Kim. “Supporting the Contact Tracing Process with WiFi Location Data: Opportunities and Challenges”. In: *Proceedings of the 2022 CHI Conference on Human Factors in Computing Systems*. CHI ’22. New York, NY, USA: Association for Computing Machinery, 2022, pp. 1–14. DOI: 10.1145/3491102.3517703.
- [C10] S. Nepal, G. J. Martinez, S. Mirjafari, S. Mattingly, **V. Das Swain**, A. Striegel, P. G. Audia, and A. T. Campbell. “Assessing the Impact of Commuting on Workplace Performance Using Mobile Sensing”. In: *IEEE Pervasive Computing* 20.4 (2021), pp. 52–60. ISSN: 1536-1268, 1558-2590. DOI: 10.1109/MPRV.2021.3112399.
- [C11] **V. Das Swain**, K. Saha, M. D. Reddy, H. Rajvanshy, G. D. Abowd, and M. De Choudhury. “Modeling Organizational Culture with Workplace Experiences Shared on Glassdoor”. In: *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems*. CHI ’20. New York, NY, USA: Association for Computing Machinery, 2020, pp. 1–15. DOI: 10.1145/3313831.3376793.
- [C12] S. M. Mattingly, J. M. Gregg, P. Audia, A. E. Bayraktaroglu, A. T. Campbell, N. V. Chawla, **V. Das Swain**, M. De Choudhury, S. K. D’Mello, A. K. Dey, G. Gao, K. Jagannath, K. Jiang, S. Lin, Q. Liu, G. Mark, G. J. Martinez, K. Masaba, S. Mirjafari, E. Moskal, R. Mulukutla, K. Nies, M. D. Reddy, P. Robles-Granda, K. Saha, A. Sirigiri, and A. Striegel. “The Tesseract Project: Large-Scale, Longitudinal, *In Situ* Multimodal Sensing of Information Workers”. In: *Extended Abstracts of the 2019 CHI Conference on Human Factors in Computing Systems*. Glasgow Scotland Uk: ACM, 2019, pp. 1–8. DOI: 10.1145/3290607.3299041.

Refereed Journal Articles

- [J1] J. Hernandez, **V. Das Swain**, J. Suh, D. McDuff, J. Amores, G. Ramos, K. Rowan, B. Houck, S. Iqbal, and M. Czerwinski. “Triple Peak Day: Work Rhythms of Software Developers in Hybrid Work”. In: *IEEE Transactions on Software Engineering* (2024), pp. 1–11. ISSN: 1939-3520. DOI: 10.1109/TSE.2024.3504831.

- [J2] **V. Das Swain**, H. Kwon, S. Sargolzaei, B. Saket, M. Bin Morshed, K. Tran, D. Patel, Y. Tian, J. Philipose, Y. Cui, T. Plötz, M. De Choudhury, and G. D. Abowd. “Leveraging WiFi Network Logs to Infer Student Collocation and Its Relationship with Academic Performance”. In: EPJ Data Science 12.1 (2023), pp. 1–25. ISSN: 2193-1127. DOI: 10.1140/epjds/s13688-023-00398-2.
- [J3] **V. Das Swain**, J. Xie, M. Madan, S. Sargolzaei, J. Cai, M. De Choudhury, G. D. Abowd, L. N. Steimle, and B. A. Prakash. “Empirical Networks for Localized COVID-19 Interventions Using WiFi Infrastructure at University Campuses”. In: Frontiers in Digital Health 5 (2023). ISSN: 2673-253X. DOI: 10.3389/fdgth.2023.1060828.
- [J4] K. Saha, T. Grover, S. M. Mattingly, **V. Das Swain**, P. Gupta, G. J. Martinez, P. Robles-Granda, G. Mark, A. Striegel, and M. De Choudhury. “Person-Centered Predictions of Psychological Constructs with Social Media Contextualized by Multimodal Sensing”. In: Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies 5.1 (2021), pp. 1–32. ISSN: 2474-9567. DOI: 10.1145/3448117.
- [J5] **V. Das Swain**, K. Saha, H. Rajvanshy, A. Sirigiri, J. M. Gregg, S. Lin, G. J. Martinez, S. M. Mattingly, S. Mirjafari, R. Mulukutla, S. Nepal, K. Nies, M. D. Reddy, P. Robles-Granda, A. T. Campbell, N. V. Chawla, S. D’Mello, A. K. Dey, K. Jiang, Q. Liu, G. Mark, E. Moskal, A. Striegel, L. Tay, G. D. Abowd, and M. De Choudhury. “A Multisensor Person-Centered Approach to Understand the Role of Daily Activities in Job Performance with Organizational Personas”. In: Proc. ACM Interact. Mob. Wearable Ubiquitous Technol. 3.4 (2020), pp. 130:1–130:27. DOI: 10.1145/3369828.
- [J6] **V. Das Swain**, K. Saha, G. Abowd, and M. D. Choudhury. “Social and Ubiquitous Technologies for Remote Worker Wellbeing and Productivity in a Post-Pandemic World”. In: IEEE CogMI (2020). DOI: 10.1109/CogMI50398.2020.00025.
- [J7] S. Gashi, E. Di Lascio, B. Stancu, **V. Das Swain**, V. Mishra, M. Gjoreski, and S. Santini. “Detection of Artifacts in Ambulatory Electrodermal Activity Data”. In: Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies 4.2 (2020), pp. 1–31. ISSN: 2474-9567. DOI: 10.1145/3397316.
- [J8] **V. Das Swain**, M. D. Reddy, K. A. Nies, L. Tay, M. De Choudhury, and G. D. Abowd. “Birds of a Feather Clock Together: A Study of Person-Organization Fit Through Latent Activity Routines”. In: Proc. ACM Hum.-Comput. Interact CSCW (2019). DOI: 10.1145/3359267.
- [J9] K. Saha, R. Mulukutla, K. Nies, P. Robles-Granda, A. Sirigiri, D. W. Yoo, P. Audia, A. T. Campbell, N. V. Chawla, S. K. D’Mello, A. K. Dey, M. D. Reddy, K. Jiang, Q. Liu, G. Mark, E. Moskal, A. Striegel, M. De Choudhury, **V. Das Swain**, J. M. Gregg, T. Grover, S. Lin, G. J. Martinez, S. M. Mattingly, and S. Mirjafari. “Imputing Missing Social Media Data Stream in Multisensor Studies of Human Behavior”. In: *2019 8th International Conference on Affective Computing and Intelligent Interaction (ACII)*. Cambridge, United Kingdom: IEEE, 2019, pp. 178–184. DOI: 10.1109/ACII.2019.8925479.
- [J10] S. Mirjafari, K. Masaba, T. Grover, W. Wang, P. Audia, A. T. Campbell, N. V. Chawla, **V. Das Swain**, M. D. Choudhury, A. K. Dey, S. K. D’Mello, G. Gao, J. M. Gregg, K. Jagannath, K. Jiang, S. Lin, Q. Liu, G. Mark, G. J. Martinez, S. M. Mattingly, E. Moskal, R. Mulukutla, S. Nepal, K. Nies, M. D. Reddy, P. Robles-Granda, K. Saha, A. Sirigiri, and A. Striegel. “Differentiating Higher and Lower Job Performers in the Workplace Using Mobile Sensing”. In: Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies 3.2 (2019), pp. 1–24. ISSN: 2474-9567. DOI: 10.1145/3328908.

- [J11] L. Chan, **V. Das Swain**, C. Kelley, K. de Barbaro, G. Abowd, and L. Wilcox. “Students’ Experiences with Ecological Momentary Assessment Tools to Report on Emotional Well-being”. In: Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies 2 (2018), pp. 1–20. DOI: 10.1145/3191735.

Grants & Funding

- 2024 *Incorporating Patient Self-Presentation in Digital Phenotyping of Mental Health: A Patient-in-the-Loop Approach to Passive Sensing*
NIDA/NIH via Center for Technology and Behavioral Health, Dartmouth College (USD 20,000)
- 2024 *Co-pilot for Worker Wellbeing*
Accelerating Foundation Models Research Program, Microsoft (USD 60,000 inc. gift)
- 2023 *Distinguished Postdoctoral Fellowship*
Khoury College of Computer Sciences, Northeastern University (USD 50,000 research & development start up over 2 years)

Talks & Panels

- 2024 *Empathetic AI Co-Workers: Personal Sensing Ecologies for Mental Wellbeing*
Workshop on the Future of Ubiquitous Computing and Human-Centered AI, University of New South Wales
- 2024 *How to Make Behavioral Sensing Work for Workers? Dissecting the Practicality of Passive Sensing Enabled Digital Phenotyping of Worker Wellbeing*
Center for Technology and Behavioral Health, Dartmouth College
- 2023 *Information Workers Perspectives on Phenotyping Performance and Wellbeing with Passive Sensing Enabled AI*
GVU Brown Bag Seminar, Georgia Institute of Technology
- 2022 *Passive Sensing Frameworks for the Future of Information Workers*
Research Seminar, Learning Planet Institute
- 2022 *Semantic Gap in Predicting Mental Wellbeing through Passive Sensing*
Data Science for Mental Health SIG, Alan Turing Institute
- 2022 *WiFi mobility models for COVID-19 enable less burdensome and more localized interventions for university campuses*
GVU Spring Research Showcase, Georgia Institute of Technology

- 2021 *WiFi mobility models for COVID-19 enable less burdensome and more localized interventions for university campuses*
GVU Fall Research Showcase, Georgia Institute of Technology
- 2021 *Using Social Media to Understand Mental Health*
Panelist, Injury Prevention Research Center at Emory University
- 2019 *CS + Social Good Research Panel*
Panelist, Georgia Institute of Technology
- 2020 *IPAT Research Round Up*
Presenter & Panelist, Institute for People and Technology at Georgia Tech
- 2020 *Grad School 101*
Panelist, Georgia Institute of Technology
- 2020, *CampusLife: Predicting Academic Performance with WiFi Sensed Group Interactions*
2019 GVU Spring Research Showcase, Georgia Institute of Technology
- 2017 *Understanding the Cost of Driving Trips*
GVU Spring Research Showcase, Georgia Institute of Technology

Press Coverage

- 2024 *Sensible and Sensitive AI for Worker Wellbeing: Factors that Inform Adoption and Resistance for Information Workers*
Khoury College of Computer Sciences, Northeastern University
- 2023 *Examining Boundaries of AI 'Sensing' to Understand Office Workers' Performance, Wellbeing*
College of Computing Press, Georgia Institute of Technology
- 2020 *New Machine Learning Method Amplifies 'Voice of the People' to Reveal Workplace Culture*
College of Computing Press, Georgia Institute of Technology

Awards & Recognitions

- 2024 *Best Paper Award at CHI 2024*
- 2022 *Winner, James D. Foley GVU Center Endowment*

2022	<i>Winner, UbiComp Gaetano Borriello Outstanding Student Award</i>
2022	<i>Best Paper Honorable Mention at CHI 2022</i>
2017	<i>Finalist, GVV Distinguished Masters Student</i>
2016	<i>Scholarship, JN Tata Endowment</i>

Service

Reviewing PACM CHI (2019, 2020, 2021, 2022*, 2023*, 2024*, 2025*)
PACM CSCW (2020, 2021*, 2024)
PACM IMWUT (2020*, 2021, 2022, 2023, 2024)
The Web Conference (2021), EPJ Data Science (2020), IEEE VIS (2020), ICWSM (2020), ACII (2019), SmartHealth (2022), ACM Health (2024), ACM COMPASS (2025), PNAS Nexus (2024), npj Digital Medicine (2025)
*Special Recognitions for Outstanding Reviews

Organizing

- Associate Editor - IMWUT (2024 - present)
- Associate Chair - Health Sub Committee, CHI (2024, 2025)
- Publicity Chair, UbiComp/ISWC (2022, 2023)
- Hybrid Chair, CHIWORK (2024)
- Meeting Coordinator, GT Ubicomp Lab, Georgia Tech (2018 - 2019)
- Coordinator, Ink. (Design Club), IIIT-Delhi (2014 - 2016)

Mentoring

- **Ph.D. Students:** Akshat Choube (Northeastern, advised by Varun Mishra), Duri Lee (KAIST, advised by Uichin Lee), Kaely Hall (Georgia Tech, advised by Jennifer Kim)
- **Masters Students:**
Georgia Tech: Shrija Mishra, Manikanta Dornala Reddy, Sonia Sargolzaei, Jiajia Xie, Samruddhi Kulkarni, Wenrui Zhang, Tanuja Sawant, Soumya Pachigolla, Linh Hoang, Abhirup Mondal, Lan Gao, Siva Karthik Ramesh, Jingjing Ye
Northeastern: Qiuyue “Joy” Zhong, Joyce Hsu, Kimberly Do
- **Undergraduate Students:**
Georgia Tech: Hemang Rajvanshy, Victor Chen, Thy Tran, Devashru Patel, Yexin Tian, Joshua Philipose, Yulai Cui, James Cai, Maanit Madan, Nesha Prabahar, Yiheng Qi, Diana Wang, Nzinga Eduardo, Hung Vo, Jarod Schneider, Heather Zhu, Yaewon Ahn, Zehao Tan (Tim), Shaan Gill, Diana Liu, William Wood
Northeastern: Win Tongtawee, Olivia Wang, Alex Jeon

Miscellaneous

Skills & Interests	Human-Computer Interaction, Ubiquitous Computing, Social Computing, Context-Aware Technologies, Computational Social Science, Behavioral Analysis, Machine Learning, Statistical Modeling, Mental Health, Wellbeing, Field Studies, Future of Work, Organizational Behavior, Personnel Management
Tools & Programs	C, C#, Unity3D, Java, Android, Python, R, Django, Flask, MySQL, MongoDB, JS, Vue
Languages	English, Hindi, Oriya, French (basic), Spanish (basic), Vietnamese (basic)