

Vedant Das Swain

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I study approaches to repurpose every day technologies to unobtrusively support productivity and wellbeing. 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 policy making.

Education

- Aug 2018 **PhD, Computer Science** (specialization: Human-Computer Interaction)
- Aug 2023 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*
- Aug 2016 **MS, Human-Computer Interaction**
- Aug 2018 Georgia Institute of Technology
Advisors: Prof. Gregory D. Abowd & Prof. Thomas Plötz
Masters Project: *Spare a Thought: Understanding Interruptibility of Reflective EMAs*
- Aug 2012 **BTech, Computer Science & Engineering**
- May 2016 Indraprastha Institute of Information Technology, Delhi (IIIT-Delhi)

Experience

- Sep 2023 **Distinguished Research Fellow, Northeastern University**
- Present **Mentors:** Prof. Stephen Intille, Prof. Varun Mishra
- May 2022 **Research Intern, Microsoft Research Redmond**
- Aug 2022 **Mentors:** Dr. Mary Czerwinski & 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 2021 **Research Intern, Microsoft Research Redmond**
- Aug 2021 **Mentors:** Dr. Shamsi Iqbal & 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. Results were submitted to CHI.
- May 2020 **Graduate Student Instructor, Georgia Institute of Technology**
- Aug 2020 **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.

- Jan 2017 **Graduate Research Assistant**, Georgia Institute of Technology
 - Dec 2022 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 2017 **UX Engineer Intern**, Siemens Healthineers
 - Dec 2017 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

- CHI 2023 **Algorithmic Power or Punishment: Information Worker Perspectives on Passive Sensing Enabled AI Phenotyping of Performance and Wellbeing**
Das Swain, V., Gao, L., Wood, W. A., Matli, S., & Abowd, G. D., & De Choudhury, M.(2022)
- CHI 2023 **Focused Time Saves Nine: Evaluating Computer-Assisted Protected Time for Hybrid Information Work**
Das Swain, V., Hernandez, H., Houck, B., Saha, K., Suh, J., Choudhury, A., Cho, T., Guo, W., Iqbal, S. T., & Czerwinski, M. P.(2022)
- CHI 2022 **Semantic Gap in Predicting Mental Wellbeing through Passive Sensing**
Das Swain, V., Chen, V., Mishra, S., Mattingly, S. M., Abowd, G. A., De Choudhury, M. (2022). *Proceedings of the 2022 CHI Conference on Human Factors in Computing Systems* | **Best Paper Honorable Mention Award**
- CHI 2022 **Supporting the Contact Tracing Process with WiFi Location Data: Opportunities and Challenges**
 Hall, K., Yoo, D. W., Zhang, W., Morshed, M. B., **Das Swain, V.**, Abowd, G. A., De Choudhury, M., Endert, A., Stasko, J., Kim, J. G. (2022). *Proceedings of the 2022 CHI Conference on Human Factors in Computing Systems*
- CHIWORK 2022 **Two Birds with One Phone: The Role of Mobile Use in the Daily Practices of a Remote Worker**
Das Swain, V., Williams, S., Fourney, A., Iqbal, S. T. (2022). *2022 Symposium on Human-Computer Interaction for Work*
- CHI 2020 **Modeling Organizational Culture with Workplace Experiences Shared on Glassdoor**
Das Swain, V.*, Saha, K.*, Abowd, G. D., & De Choudhury, M (2020). *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems* [* Co-Primary]
- CogMI 2020 **Social and Ubiquitous Technologies for Remote Worker Wellbeing and Productivity in a Post-Pandemic World**
Das Swain, V.*, Saha, K.*, Abowd, G. D., & De Choudhury, M (2020). *Proceedings of the 2020 IEEE Second International Conference on Cognitive Machine Intelligence (CogMI)* [* Co-Primary] | **Highlighted Talk at Microsoft New Future of Work Symposium '20**

- ACII 2019 **Imputing Missing Social Media Data Streams in Multisensor Studies of Human Behavior**
Saha, K., Reddy, M. D., **Das Swain, V.**, Gregg, J. M., Grover, T., Lin, S., Martinez, G. J., Mattingly, S.M., Mirjafari, S., Mulukutla, R., Nies, K., Robles-Granda, P., Sirigiri, A., Yoo, D. W., Audia, P., Campbell, A. T., Chawla, N. V., D’Mello, S. K., Dey, A. K., Jiang, K., Liu, Q., Mark, G., Moskal, E., Striegel, A., De Choudhury, M. (2019). *Proceedings of the 8th International Conference on Affective Computing and Intelligent Interaction (ACII 2019)*
- CHI 2019 **The Tesserae Project: Large-Scale, Longitudinal, In Duty, Multimodal Sensing of Information Workers**
Mattingly, S.M., Gregg, J. M., Audia, P., Bayraktaraglu, A. E., Campbell, A. T., Chawla, N. V., **Das Swain, V.**, De Choudhury, M., D’Mello, S. K., Dey, A. K., Gao, Ge., Jagannath, K., Jiang, K., Lin, S., Liu, Q., Mark, G., Martinez, G. J., Masaba, K., Mirjafari, S., Moskal, E., Mulukutla, R., Nies, K., Reddy, M. D., Robles-Granda, P., Saha, K., Sirigiri, A., Striegel, A. (2019). *Extended Abstracts of the 2019 CHI Conference on Human Factors in Computing Systems*

Refereed Journal Articles

- Frontiers
Dig. Health
2023 **Empirical Networks for Localized COVID-19 Interventions using WiFi Infrastructure at University Campuses**
Das Swain, V., Xie, J., Madan, M., Sargolzaei, S., Cai, J., De Choudhury, M., Abowd, G. D., Steimle, L., & Prakash, B. A. (2023)
- EPJ
Data Sc.
2023 **Leveraging WiFi Network Logs to Infer Social Interactions: A Case Study of Academic Performance and Student Behavior**
Das Swain, V., Kwon, H., Sargolzaei, S., Saket, B., Bin Morshed, M., Tran, K., Patel, D., Tian, Y., Philipose, J., Cui, Y., Plötz, T., De Choudhury, M., & Abowd, G. D. (2022)
- Pervasive
Computing
2021 **Assessing the Impact of Commuting on Workplace Performance Using Mobile Sensing**
Nepal, S., Martinez, G. J., Mirjafari, S., Mattingly, S., **Das Swain, V.**, Striegel, A., Audia, P. G., & Campbell, A. T. (2021). *IEEE Pervasive Computing*
- IMWUT
2021 **Person-Centered Predictions of Psychological Constructs with Social Media Contextualized by Multimodal Sensing**
Saha, K., Grover, T., Mattingly, S.M., **Das Swain, V.**, Gupta, P., Martinez, G.J., Robles-Granda, P., Mark, G., Striegel, A. & De Choudhury, M (2021). *Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (PACM IMWUT)*
- IMWUT
2020 **Detection of Artifacts in Ambulatory Electrodermal Activity Data**
Gashi, S., Di Lascio, E., Stancu, B., **Das Swain, V.**, Mishra, V., Gjoreski, M. and Santini, S., (2020). *Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (PACM IMWUT)*
- CSCW
2019 **Birds of a Feather Clock Together: A Study of Person-Organization Fit Through Latent Activity Routines**
Das Swain, V., Reddy, M. D., Nies, K. A., Tay, L., De Choudhury, M., & Abowd, G. D. (2019). *Proceedings of the ACM on Human-Computer Interaction (PACM HCI), CSCW*

- IMWUT 2019 **A Multisensor Person-Centered Approach to Understand the Role of Daily Activities in Job Performance with Organizational Personas**
Das Swain, V., Saha, K., Rajvanshy, H., Sirigiri, A., Gregg, J., Lin, S., Martinez, G. J., Mattingly, S. M., Mirjafari, S., Mulukutla, R., Nepal, S., Nies, K. A., Reddy, M. D., Robles-Granda, P., Campbell, A., Chawla, N. V., D’Mello, S., Dey, A. K., Jiang, K., Liu, Q., Mark, G., Moskal, E., Striegel, A., Tay, L., Abowd, G. D., & De Choudhury, M.(2019). *Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (PACM IMWUT)*
Best Presentation Nominee at UbiComp ’20
- IMWUT 2019 **Differentiating higher and lower job performers in the workplace using mobile sensing**
 Mirjafari, S., Masaba, K., Grover, T., Wang, W., Audia, P., Campbell, A. T., Chawla, N. T., **Das Swain, V.**, De Choudhury, M., Dey, A. K., D’Mello, S. K., Gao, G., Gregg, J. M., Jagannath, K., Jiang, K., Lin, S., Liu, Q., Mark, G., Martinez, G. J., Mattingly, S. M., Moskal, E., Mulukutla, R., Nepal, S., Nies, K. A., Reddy, M. D., Robles-Granda, P., Saha K., Sirigiri, A., & Striegel, A.. (2019). *Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (PACM IMWUT)*
- IMWUT 2018 **Students’ Experiences with Ecological Momentary Assessment Tools to Report on Emotional Well-being**
 Chan, L., **Das Swain, V.**, Kelley, C., de Barbaro, K., Abowd, G. D., & Wilcox, L. (2018). *Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (PACM IMWUT)*

Under Review Submissions

- JMIR Formative Research **Leveraging Social Media to Predict COVID-induced Disruptions to Mental Wellbeing among University Students: Pilot Study**
Das Swain, V., Ye, J., Ramesh, S. K., Mondal, A., Abowd, G. D., & De Choudhury, M. (2023)

Talks, Demos & Panels

- 2023 *Information Workers Perspectives on Phenotyping Performance and Wellbeing with Passive Sensing Enabled AI*
 GUV 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*
 GUV 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, 2019 *CampusLife: Predicting Academic Performance with WiFi Sensed Group Interactions*
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

- 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

- 2022 Winner, James D. Foley GVU Center Endowment
- 2022 Winner, UbiComp Gaetano Borriello Outstanding Student Award
- 2022 Best Paper Honorable Mention at CHI 2022
- 2017 Finalist, GVU Distinguished Masters Student
- 2016 Scholarship, JN Tata Endowment

Service

Reviewing PACM CHI (2019, 2020, 2021, 2022*, 2023*), PACM CSCW (2020, 2021*, 2024), PACM IMWUT (2020*, 2021, 2022, 2023), The Web Conference (2021), EPJ Data Science (2020), IEEE VIS (2020), ICWSM (2020), ACHI (2019), SmartHealth (2022)
***Special Recognitions for Outstanding Reviews**

Organizing

- Associate Chair - Health Sub Committee, CHI (2024)
- Publicity Chair, UbiComp/ISWC (2022, 2023)
- Meeting Coordinator, GT UbiComp Lab, Georgia Tech (2018 - 2019)
- Coordinator, Ink. (Design Club), IIT-Delhi (2014 - 2016)

Mentoring

- *Masters Students*: 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
- *Undergraduate Students*: 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

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)