Vedant Das Swain

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I study approaches to repurpose every day technologies to design passive sensing frameworks that support productivity and wellbeing. My work combines sensing with computational modeling and human-computer interaction to uncover naturalistic ways to improve the future of work.

Education

Aug 2018 - Present

PhD, Computer Science (specialization: Human-Computer Interaction)
Georgia Institute of Technology
Advisors: Prof. Gregory D. Abowd & Prof. Munmun De Choudhury

Aug 2016 - Aug 2018

MS, Human-Computer Interaction
Georgia Institute of Technology
Advisors: Prof. Gregory D. Abowd & Prof. Thomas Plötz
Masters Project: *Spare a Thought: Understanding Interruptibility of Reflective EMAs*

Aug 2012 - May 2016

BTech, Computer Science & Engineering
Indraprastha Institute of Information Technology, Delhi (IIIT-Delhi)
Advisors: Prof. Vinayak Naik | **Thesis Project:** *Movie Miner: Using Social Media Data for Collaborative Filtering of Movie Recommendations*

Experience

May 2021 - Aug 2021

Research Intern, Microsoft Research Redmond
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 - Aug 2020

Graduate Student Investigator, 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.

Jan 2017 - Dec 2021

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 2017 - 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 Journal Articles

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 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 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)*

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*

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

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)*

Refereed Conference Proceedings

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**

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 CHI Conference on Human Factors in Computing Systems* [* Co-Primary]

CHI 2019 (Case Study)
The Tesserae Project: Experiences with Large-Scale, Longitudinal, In Situ, 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, G., 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). *Proceedings of the CHI Conference on Human Factors in Computing Systems* [First 2 Authors, A-Z Other Authors]

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)*

Talks, Demos & Panels

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

2019	*Tesserae: Multimodal Sensing to Model Job Performance and Wellbeing*
	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

2020	*New Machine Learning Method Amplifies 'Voice of the People' to Reveal Workplace Culture*
	College of Computing Press, Georgia Institute of Technology

Achievements

2017	Finalist, GVU Distinguished Masters Student
2016	Scholarship, JN Tata Endowment

Miscellaneous

Reviewing PACM CHI (2019, 2020, 2021, 2022), PACM CSCW (2020, 2021), PACM IMWUT (2020, 2021), The Web Conference (2021), EPJ Data Science (2020), IEEE VIS (2020), ICWSM (2020), ACII (2019)

Mentoring
- *Masters Students*: Shrija Mishra, Manikanta Dornala Reddy, Sonia Sargolzaei, Jiajia Xie, Samruddhi Kulkarni, Wenrui Zhang, Tanuja Sawant, Soumya Pachigolla, Linh Hoang, Abhirup Mondal
- *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

Organizing
- Meeting Coordinator, GT Ubicomp Lab, Georgia Tech (2018 - 2019)
- Coordinator, Ink. (Design Club), IIIT-Delhi (2014 - 2016)

Skills & Interests 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)