

I am a computer scientist in the interdisciplinary areas of computational social science, social computing, and fairness, accountability, transparency, and ethics in AI (FATE). By complementing multimodal datastreams with social media, I adopt methods from machine learning, statistics, natural language, and causal inference analysis to examine wellbeing. A stream of my research focuses on wellbeing in situated contexts, such as college campuses and workplaces. I am interested in questions relating to understanding the in-practice utility and ecological validity of wellbeing sensing technologies, which includes evaluating the harms and benefits of these technologies, and rethinking the responsible design of wellbeing technologies.

Education

- 2016–2021 **Doctor of Philosophy (Ph.D.), Computer Science.**
School of Interactive Computing, College of Computing, Georgia Institute of Technology **GPA:** 4.0/4.0
Doctoral Minor: Computational Social Science and International Affairs
Dissertation: Computational and Causal Approaches on Social Media and Multimodal Sensing Data: Examining Wellbeing in Situated Contexts
Committee: Munmun De Choudhury (Chair & Advisor), Gregory D. Abowd, Thomas Plötz, Emre Kıcıman, Gloria Mark
- 2008–2012 **Bachelor of Technology (Hons.), Computer Science and Engineering.**
Computer Science and Engineering, Indian Institute of Technology Kharagpur
Guide: Sujoy Ghose | **B.Tech Project:** Ontology-based Semantic Information Retrieval

Publications

[Google Scholar](#) | [DBLP](#) | [ACM DL](#) | [ResearchGate](#).

Journal Articles

- J₂₅ 2023 Kim, M., **Saha, K.**, De Choudhury, M., & Choi, D. (2022). Supporters First: Understanding Online Social PACM HCI: Support on Mental Health from a Supporter Perspective. In Proceedings of the ACM on Human-Computer Interaction CSCW (Forthcoming).
- J₂₄ 2023 Ehsan, U., **Saha, K.**, De Choudhury, M., & Riedl, M. O. (2023). Charting the Sociotechnical Gap in Explainable PACM HCI: AI: A Framework to Address the Gap in XAI. In Proceedings of the ACM on Human-Computer Interaction (Forthcoming), CSCW [Link](#).
- J₂₃ 2022 **Saha, K.**, Yousuf, A., Boyd, R. L., Pennebaker, J. W., & De Choudhury, M. (2022). Social Media Discussions Nature Sci Rep Predict Mental Health Consultations on College Campuses. Nature Scientific Reports, (2022) 12:123, [Link](#).
- J₂₂ 2022 Bin Morshed, M., Kulkarni, S. S., **Saha, K.**, Li, R., Roper, L. G., Nachman, L., Lu, H., de Barbaro, K., De ACM Health Choudhury, M., Ploetz, T., & Abowd, G. D. (2022). Food, Mood, Context: Examining College Students' Eating Context and Mental Well-being. ACM Transactions on Computing for Healthcare, [Link](#).
- J₂₁ 2022 Zhou, J., **Saha, K.**, López, I., Deeter, C. R., Yoo, D. Y., De Choudhury, M., & Arriaga, R. (2022). Veteran PACM HCI: Critical Theory as a Lens to Understand Veterans' Needs and Social Support on Social Media. In Proceedings of CSCW the ACM on Human-Computer Interaction, 6, (CSCW1), 133, [PDF](#).
- J₂₀ 2022 Kumar, N., Corpus, I., Hans, M., Harle, N., Yang, N., McDonald, C., Sakai, S. N., Janmohamed, K. A., Chen, BMC K., Altice, F. L., Tang, W., Schwartz, J. L., Jones-Jang, S. M., **Saha, K.**, Memon, S. A., Bauch, C. T., De Public Health Choudhury, M., Papakyriakopoulos, O., Tucker, J. D., Goyal, A., Tyagi, A., Khoshnood, K., Omer, S. (2022). COVID-19 vaccine perceptions in the initial phases of US vaccine roll-out: an observational study on Reddit. BMC Public Health (2022), 22:446, [Link](#).
- J₁₉ 2021 **Saha, K.**, Torous, J., Kıcıman, E., & De Choudhury, M. (2021). Understanding Side Effects of Antidepressants: JMIR MH Large-scale Longitudinal Study on Social Media Data. JMIR Mental Health; 8 (3), [Link](#).

- J₁₈ 2021 **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. (2020). 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), 32, (* co-primary authors), Presented at UbiComp 2021, [PDF](#).
- J₁₇ 2021 **Saha, K.**, Yousuf, A., Hickman, L., Gupta, P., Tay, L., & De Choudhury, M. (2021). A Social Media Study on Demographic Differences in Perceived Job Satisfaction. In Proceedings of the ACM on Human-Computer Interaction, CSCW 5, (CSCW1), 167, [PDF](#).
- J₁₆ 2021 ElSherief, M., **Saha, K.**, Gupta, P., Mishra, S., Seybolt, J., Xie, J., O'Toole, M., Burd-Sharps, S., & De Choudhury, M. (2021). Impacts of School Drills on the Psychological Well-being of American K-12 School Communities: A Social Media Study. Nature Humanities and Social Sciences Communications, [Link](#).
- J₁₅ 2021 Gong, C., **Saha, K.**, & Chancellor, S. (2021). "The Smartest Decision for My Future": Social Media Reveals Challenges and Stress During Post-College Life Transition. In Proceedings of the ACM on Human-Computer Interaction, CSCW 5, (CSCW2), 298, [PDF](#).
- J₁₄ 2021 Martinez, G.J., Mattingly, S. M., Robles-Granda, P., **Saha, K.**, Sirigiri, A., Young, J., Chawla, N. V., De Choudhury, M., D'Mello, S. K., Mark, G., & Striegel, A. (2021). Predicting Participant Compliance with Fitness Tracker Wearing and EMA Protocols in Information Workers: An Observational Study. Journal of Medical Internet Research mHealth and uHealth; 9(11), [Link](#).
- J₁₃ 2021 Mirjafari, S., Nepal, S. K., Bagherinezhad, H., Martinez, G. J., **Saha, K.**, Obuchi, M., Audia, P., Chawla, N. V., Dey, A. K., Striegel, A., & Campbell, A. T. (2021). Predicting Job Performance Using Mobile Sensing. IEEE Pervasive Computing, [Link](#).
- J₁₂ 2021 Robles-Granda, P., Lin, S., Wu, X., Campbell, A. T., De Choudhury, M., Dey, A.K., D'Mello, S. K., Gregg, J. M., Grover, T., Mark, G., Martinez, G. J., Masaba, K., Mattingly, S. M., Mirjafari, S., Moskal, E., Nies, K., **Saha, K.**, Striegel, A., & Chawla, N. V. (2021). Jointly Modeling and Predicting Job Performance, Personality, and Well-Being. In IEEE Computational Intelligence Magazine, 16 (2), [Link](#).
- J₁₁ 2020 **Saha, K.**, Torous, J., Caine, E. D., & De Choudhury, M. (2020). Psychosocial Effects of the COVID-19 Pandemic: Large-scale Quasi-Experimental Study on Social Media. Journal of Medical Internet Research (JMIR), 22(11), e22600, [Link](#).
- J₁₀ 2020 Bin Morshed, M., Kulkarni, S. S., Li, R., **Saha, K.**, Nachman, L., Lu, H., Galante, L., Srivastava, S., Mirabella, L., De Choudhury, M., de Barbaro, K., Ploetz, T., & Abowd, G. D. (2020). A Real-Time Eating Detection System for Capturing Eating Moments and Triggering EMAs to Collect Further Context. Journal of Medical Internet Research mHealth and uHealth.
- J₉ 2019 **Saha, K.**, Reddy, M. D., Mattingly, S. M., Moskal, E., Sirigiri, A., & De Choudhury, M., (2019). LibRA: On LinkedIn based Role Ambiguity and Its Relationship with Wellbeing and Job Performance. In Proceedings of the ACM on Human-Computer Interaction (PACM HCI), 3, (CSCW), 137., Presented at CSCW 2019, [PDF](#).
- J₈ 2019 **Saha, K.**, Kim, S.C., Reddy, M. D., Carter, A.J., Sharma, E., Haimson, O.L., & De Choudhury M., (2019). The Language of LGBTQ+ Minority Stress Experiences on Social Media. In Proceedings of the ACM on Human-Computer Interaction (PACM HCI), 3, (CSCW), 89., Presented at CSCW 2019, [PDF](#).
- J₇ 2019 Das Swain, V., **Saha, K.**, Rajvanshy, H., Sirigiri, A., Gregg, J.M., Lin, S., Martinez, G.J, Mattingly, S. M., Mirjafari, S., Mulukutla, R., Nies, K.A., Reddy, M. D., Robles-Granda, P., Campbell, A.T., Chawla, N.V., D'Mello, S.K., Dey, A. K., Jiang, K., Liu, Q., Mark, G., Moskal, E., Striegel, A., Tay, L., Abowd, G. D., & De Choudhury, M (2019). A Multisensor Person-Centered Approach to Understand the Role of Daily Activities in Job Performance with Organizational Personas. In Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies, 3,(4),130., (Non first four authors are listed alphabetically), [PDF](#).
- J₆ 2019 Bin Morshed, M., **Saha, K.**, Li, R., D'Mello, S.K., De Choudhury, M., Abowd, G. D., & Ploetz, T., (2019). Prediction of Mood Instability with Passive Sensing. In Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies, 3,(3),75., [PDF](#).

- J₅ 2019 **Saha, K.***, Torous, J.*, Ernala, S.K., Rizuto, C., Stafford, A., & De Choudhury, M. (2019). A Computational Study of Mental Health Awareness Campaigns on Social Media. *Translational Behavioral Medicine*, 9(6), (* co-primary authors), [Link](#).
- J₄ 2019 Mirjafari, S., Masaba, K., Grover, T., Wang, W., Audia, P., Campbell, A.T., Chawla, N.V., Das Swain, V., De Choudhury, M., D'Mello, S.K., Dey, A.K., Gao, G., Gregg, J.M., Grover, T., 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). 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), 37, (Non *first four* authors are listed alphabetically), [PDF](#).
- J₃ 2018 **Saha, K.**, & De Choudhury, M. (2017). Modeling Stress with Social Media Around Incidents of Gun Violence on College Campuses. In *Proceedings of the ACM on Human-Computer Interaction*, 1, (CSCW), 92., Presented at CSCW 2018, [PDF](#).
- J₂ 2017 **Saha, K.**, Chan, L., de Barbaro, K., Abowd, G. D., & De Choudhury, M. (2017). Inferring Mood Instability on Social Media by Leveraging Ecological Momentary Assessments. *Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies*, 1, (3), 95., Presented at UbiComp 2017, [PDF](#).
- J₁ 2017 **Saha, K.**, Weber, I., Birnbaum, M.L., & De Choudhury, M. (2017). Characterizing Awareness of Schizophrenia Among Facebook Users by Leveraging Facebook Advertisement Estimates. *Journal of Medical Internet Research*, 19(5)., Presented at Mental Health Symposium, CHI 2017, [Link](#).

Refereed Conference Papers

- C₂₅ 2023 Yuan, Y., **Saha, K.**, Keller, B., Isometsä, E., Aledavood, T. (2023). Mental Health Coping Stories on Social Media: A Causal-Inference Study of Papageno Effect. In *Proceedings of the ACM Web Conference 2023 (WWW)* (Forthcoming).
- C₂₄ 2023 Das Swain, V., Hernandez, J., Houck, B., **Saha, K.**, Suh, J., Chaudhry, A., Cho, T., Guo, W., Iqbal, S. T., Czerwinski, M. (2023). Focused Time Saves Nine: Evaluating Computer-Assisted Protected Time for Hybrid Information Work In *Proceedings of the CHI Conference on Human Factors in Computing Systems* (Forthcoming).
- C₂₃ 2023 Sefidgar, Y. S., Jörke, M., Suh, J., **Saha, K.**, Iqbal, S. T., Ramos, G., Czerwinski, M. (2023). Lessons Learned for Data-Driven Implementation Intentions with Mental Contrasting In *Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems Extended Abstracts*, (Forthcoming).
- C₂₂ 2023 Chen, K., Babaeianjelodar, M., Shi, Y., Janmohamed, K., Sarkar, R., Weber, I., Davidson, T., De Choudhury, M., Huang, J., Yadav, S., Khudabuksh, A., Bauch, C., Nakov, P., Papakriakopoulos, O., **Saha, K.**, Khoshnood, K., & Kumar, N. (2023). Partisan US News Media Representations of Syrian Refugees. *Proceedings of the 16th International AAAI Conference on Web and Social Media (ICWSM)* (Forthcoming).
- C₂₁ 2022 Cascalheira, C. J., Hamdi, S. M., Scheer, J. R., **Saha, K.**, Boubrahimi, S. F., & De Choudhury, M. (2022). Classifying minority stress disclosure on social media with bidirectional long short-term memory. *Proceedings of the 15th International AAAI Conference on Web and Social Media (ICWSM)*, [PDF](#).
- C₂₀ 2022 Chen, K., Feng, A., Aanegola, R., **Saha, K.**, Wong, A., Schwitzky, Z., Lee, R., O'Hanlon, R., De Choudhury, M., Altice, F. L., Khoshnood, K., & Kumar, N. (2022). Categorizing Memes about the Ukraine Conflict. *The 11th International Conference on Computational Data and Social Networks (CSoNet)*.
- C₁₉ 2021 **Saha, K.**, Seybolt, J., Mattingly, S. M., Aledavood, T., Konjeti, C., Martinez, G. J., Grover, T., Mark, G., & De Choudhury, M. (2021). What Life Events are Disclosed on Social Media, How, When, and By Whom? In *Proceedings of the CHI Conference on Human Factors in Computing Systems*, [PDF](#).
- C₁₈ 2021 **Saha, K.**, Liu, Y., Vincent, N., Chowdhury, F. A., Neves, L., Shah, N., & Bos, M. W. (2021). AdverTiming Matters: Examining User Ad Consumption for Effective Ad Reallocations on Social Media. In *Proceedings of the CHI Conference on Human Factors in Computing Systems*, [PDF](#).
- C₁₇ 2021 Wang, Q., **Saha, K.**, Gregori, E., Joyner, D., & Goel, A. K. (2021). Towards Mutual Theory of Mind in Human-AI Interaction: How Language Reflects What Students Perceive About a Virtual Teaching Assistant. In *Proceedings of the CHI Conference on Human Factors in Computing Systems*, [PDF](#).

- C₁₆ 2021 Chowdhury, F. A., Liu, Y., **Saha, K.**, Vincent, N., Neves, L., Shah, N., & Bos, M. W. (2021). CEAM: The Effectiveness of Cyclic and Ephemeral Attention Models of User Behavior on Social Platforms. In Proceedings of the 15th International AAAI Conference on Web and Social Media, [PDF](#).
AAAI ICWSM
- C₁₅ 2021 Chowdhury, F. A., Saha, D., Hasan, M. R., **Saha, K.**, & Mueen, A. (2021). Examining Factors Associated with Twitter Account Suspension Following the 2020 U.S. Presidential Election. Proceedings of the 2021 IEEE/ACM ASONAM International Conference on Advances in Social Networks Analysis and Mining, [PDF](#).
ASONAM
- C₁₄ 2020 Das Swain, V.*, **Saha, K.***, Abowd, G. D., & De Choudhury, M. (2020). Social Media and Ubiquitous Technologies for Assessing Remote Worker Wellbeing and Productivity in a Post-Pandemic World. Proceedings of the 2020 IEEE Second International Conference on Cognitive Machine Intelligence (CogMI), (* co-primary authors).
IEEE CogMI
- C₁₃ 2020 **Saha, K.**, & Sharma, A. (2020). Causal Factors of Effective Psychosocial Outcomes in Online Mental Health Communities. Proceedings of the 14th International AAAI Conference on Web and Social Media., Presented at ICWSM 2020, [PDF](#).
AAAI ICWSM
- C₁₂ 2020 Das Swain, V.*, **Saha, K.***, Reddy, M. D., Rajvanshy, H., Abowd, G. D., & De Choudhury, M. (2020). Modeling Organizational Culture with Workplace Experiences Shared on Glassdoor. Proceedings of the CHI Conference on Human Factors in Computing Systems, (* co-primary authors), Video Presented for CHI 2020, [PDF](#).
ACM CHI
- C₁₁ 2020 Bin Morshed, M.*, **Saha, K.***, De Choudhury, M., Abowd, G. D., & Ploetz, T., (2020). Modeling Self-Esteem with Passive Sensing. In Proceedings of the 14th EAI International Conference on Pervasive Computing Technologies for Healthcare, (* co-primary authors), Video Presented for PervasiveHealth 2020, [PDF](#).
EAI Pervasive Health
- C₁₀ 2020 **Saha, K.**, Ernala, S. K., Dutta, S., Sharma, E., & De Choudhury, M. (2020). Understanding Moderation in Online Mental Health Communities. In 22nd International Conference on Human-Computer Interaction, Springer LNCS, Presented at HCII 2020, [PDF](#).
HCII
- C₉ 2019 **Saha, K.**, Sugar, B., Torous, J., Abrahao, B., Kiciman, E., & De Choudhury, M. (2019). A Social Media Study on The Effects of Psychiatric Medication Use. In Proceedings of the 13th International AAAI Conference on Web and Social Media., Presented at ICWSM 2019, [Outstanding Study Design Paper](#), [PDF](#).
AAAI ICWSM
- C₈ 2019 **Saha, K.**, Chandrasekharan, E., & De Choudhury, M. (2019). Prevalence and Psychological Effects of Hateful Speech in Online College Communities. In Proceedings of the 11th ACM Conference on Web Science, Presented at WebSci 2019, [PDF](#).
ACM WebSci
- C₇ 2019 **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). Imputing Missing Social Media Data Streams in Multisensor Studies of Human Behavior. In Proceedings of the 8th International Conference on Affective Computing and Intelligent Interaction (ACII), (Non first three authors are listed alphabetically), Presented at ACII 2019, [PDF](#).
ACII
- C₆ 2019 **Saha, K.**, Bayraktaraglu, A.E., Campbell, A.T., Chawla, N.V., De Choudhury, M., D'Mello, S.K., Dey, A.K., Gao, G., Gregg, J.M., Jagannath, K., Mark, G., Martinez, G.J., Mattingly, S. M., Moskal, E., Sirigiri, A., Striegel, A., & Yoo, D. W., (2019). Social Media as a Passive Sensor in Longitudinal Studies of Human Behavior and Wellbeing. In Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems Extended Abstracts, (Non first authors are listed alphabetically), Presented at CHI 2019, [PDF](#).
ACM CHI Case Study
- C₅ 2019 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). The Tesserae Project: Large-Scale, Longitudinal, *In Situ*, Multimodal Sensing of Information Workers. In Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems Extended Abstracts, (Non first two authors are listed alphabetically), [PDF](#).
ACM CHI Case Study
- C₄ 2019 Ribeiro, F. N.*, **Saha, K.***, Babaei, M., Henrique, L., Messias, J., Benevenuto, F., Goga, O., Gummadi, K. P., & Redmiles, E. M. (2019). On Microtargeting Socially Divisive Ads: A Case Study of Russia-Linked Ad Campaigns on Facebook. In Proceedings of the 2nd ACM Conference on Fairness, Accountability, and Transparency (FAT*), (* co-primary authors), Presented at FAT* 2019, [PDF](#).
ACM FAT*

- C₃ 2019 **Saha, K.**, Reddy, M. D., & De Choudhury M., (2019). JobLex: A Lexico-Semantic Knowledgebase of Occupational SocInfo Information Descriptors. 11th International Conference on Social Informatics (SocInfo), [PDF](#).
- C₂ 2018 **Saha, K.**, Weber, I., & De Choudhury, M. (2018). A Social Media Based Examination of the Effects of Counseling AAAI ICWSM Recommendations After Student Deaths on College Campuses. In Proceedings of the 12th International AAAI Conference on Web and Social Media., Presented at ICWSM 2018, [PDF](#).
- C₁ 2017 **Saha, K.***, Sharma, E.*, Ernala, S.K.*, Ghoshal, S.*, & De Choudhury, M. (2017). Analyzing Ideological ACM CSS Discourse on Social Media: A Case Study on the Abortion Discourse. Proceedings of the 2017 International Conference of The Computational Social Science Society of the Americas (CSS), (* co-primary authors), [PDF](#).

Invited Articles and Refereed Workshop Articles and Presentations

- B₁ 2023 **Saha, K.** and De Choudhury, M. (2023). Examining Well-Being in Situated Contexts with Computational Book Chapter Modeling of Social Media Data (Forthcoming). Mobile Sensing in Psychology: Methods and Applications, Guilford Press.
- E₁ 2023 **Saha, K.**, Jaidka, K., Kim, J., and Suh, J. (2023). Digital Mental Health and Wellbeing under Crisis. Topic Editorial Proposal at Frontiers in Digital Health.
- W₁₁ 2022 Kawakami, A., Liao, Q. V., Olteanu, A., & **Saha, K.** (2022). Multi-stakeholder Attitudes Towards Wellbeing MSR Montreal Sensing Technologies in the Workplace: Developing a Taxonomy of Harms. MSR Montreal Poster Session.
- W₁₁ 2022 **Saha, K.**, Liu, Y., Vincent, N., Chowdhury, F. A., Neves, L., Shah, N., & Bos, M. W. (2022). AdverTiming SCP Matters. Society for Consumer Psychology, [PDF](#).
- M₁ 2021 **Saha, K.** and De Choudhury, M. (2021). Assessing the Mental Health of College Students by Leveraging Social XRDS Media Data. ACM XRDS, [PDF](#).
- DC 2020 **Saha, K.** (2020). Computational and Causal Examinations of Wellbeing in Situated Contexts by Leveraging CSCW DC Social Media and Multimodal Data. In CSCW 2020 Doctoral Consortium, [PDF](#).
- W₁₀ 2020 Das Swain, V.*, **Saha, K.***, Abowd, G. D., & De Choudhury, M. (2020). Social and Ubiquitous Technologies for New Future of Future of Worker Wellbeing. In Microsoft Research Symposium on the New Future of Work, (* co-primary authors), [In Highlighted Talks](#), [PDF](#).
- W₉ 2020 Martinez, G. J.*, Mattingly, S. M.*, Young, J., Faust, L., Dey, A.K., Campbell, A.T., De Choudhury, M., Mirjafari, WristSense, S., Nepal, S., Robles-Granda, P., **Saha, K.**, & Striegel, A. (2019). Improved Sleep Detection Through the Fusion IEEE PerCom of Phone Agent and Wearable Data Streams. In WristSense 2020: Workshop on Sensing Systems and Applications Using Wrist Worn Smart Devices, colocated with IEEE PerCom, (* co-primary authors), [Best Paper Honorable Mention](#), [PDF](#).
- W₈2020 O'Toole, M. J., Burd-Sharps, S., De Choudhury, M., ElSherif, M., **Saha, K.**, Gupta, P., Mishra, S., & Xie, J. APPAM (2020, November). Assessing the Impacts of Active Shooter Drills in Schools with Big Data. In 2020 APPAM Fall Research Conference. APPAM.
- W₇ 2019 **Saha, K.**, Das Swain, V., Yoo, D. W., Abowd, G. D., & De Choudhury, M. (2019). Tesserae: Multimodal ITU Sensing To Model Individual Differences and Job Performance at Workplaces. In ITU Kaleidoscope Demos 2019. Kaleidoscope
- W₆ 2019 **Saha, K.***, Moshed, M. B.*, Moon, S., O'Connor, J., Das, S., Abowd, G. D., Ploetz, T., & De Choudhury, ITU M. (2019). Understanding Health-Oriented Privacy Perceptions Regarding Ubiquitous Technology Use. In ITU Kaleidoscope Demos 2019, (* co-primary authors).
- W₅ 2019 **Saha, K.**, Chandrasekharan, E., & De Choudhury, M. (2019). Hateful Speech in Online College Communities. In Norms, ICWSM Managing and Designing for Norms in Online Communities Workshop, colocated with ICWSM 2019, [PDF](#).
- W₄ 2019 Hickman, L., **Saha, K.**, De Choudhury, M., & Tay, L. (2019). Automated Tracking of Components of Job ML, SIOP Satisfaction via Text Mining of Twitter Data. In Machine Learning Symposium, colocated with Annual Society for Industrial and Organizational Psychology Conference (SIOP 2019), [PDF](#).

W₃ 2019 Future of Work, CHI Lin, S., Mattingly, S. M., Han, X., Audia, P., Campbell, A. T., Das Swain, V., De Choudhury, M., D'Mello, S.K., Dey, A.K., Gao, G., Gregg, J.M., Jagannath, K., Jiang, K., Liu, Q., Mark, G., Martinez, G.J, Masaba, K., Moskal, E., Mulukutla, R., Nies, K.A., Reddy, M. D., Robles-Granda, P., **Saha, K.**, Sirigiri, A., & Striegel, A., Chawla, N.V., (2019). Sensing Personality to Predict Job Performance. In the Future of Work Workshop, colocated with ACM CHI 2019, [PDF](#).

W₂ 2018 SMHealth, ICWSM **Saha, K.**, Ernala, S., Rizuto, C., Torous, J., & De Choudhury, M. (2018). A Study of Mental Health Awareness Campaigns on Social Media. In Social Media and Health (SMHealth) Workshop, colocated with ICWSM 2018.

W₁ 2017 MH, CHI **Saha, K.**, Weber, I., Birnbaum, M.L., and De Choudhury, M. (2017). Characterizing Awareness of Schizophrenia Among Facebook Users by Leveraging Facebook Advertisement Estimates. In Mental Health Symposium, colocated with CHI 2017.

Under Review Submissions

U₁ 2023 Under Review Chowdhary, S., Kawakami, A., Gray, M. L., Suh, J., Olteanu, A., & **Saha, K.** (2023). Can Workers Meaningfully Consent to Workplace Wellbeing Technologies? Under Review.

U₂ 2023 Under Review Kawakami, A., Chowdhary, S., Iqbal, S. T., Liao, Q. V., Olteanu, A., Suh, J., & **Saha, K.** (2023). Sensing Wellbeing in the Workplace, Why and For Whom? Envisioning Impacts with Organizational Stakeholders. Under Review.

U₃ 2023 Under Review Sefidgar, Y. S., Jörke, M., Suh, J., **Saha, K.**, Iqbal, S. T., Ramos, G., & Czerwinski, M., (2023). Improving Work-Nonwork Balance with Data-Driven Implementation Intention and Mental Contrasting. Under Review.

U₄ 2023 Under Review Mahdavi Moghaddam, J., **Saha, K.**, Hui, J., Dillahun, T. W., & Bagheri, E., (2023). "I still think I am unqualified": A Social Media Lens on The Needs and Concerns of Information Workers. Under Review.

U₅ 2023 Under Review Haresamudram, H., Suh, J., Hernandez, J., Butler, J., **Saha, K.**, & Czerwinski, M. (2023). On the Potential of Self-Supervised Learning for Predicting Stress and Stressors from Passive Sensing. Under Review.

U₆ 2023 Under Review Suh, J., Howe, E., Lewis, R., Hernandez, J., **Saha, K.**, Althoff, T., & Czerwinski, M. (2023). Towards Tailoring Just-in-time Adaptive Intervention Systems for Workplace Stress Reduction. Under Review.

U₇ 2023 Under Review **Saha, K.**, Iqbal, S. T., (2023). Focus Time for Wellbeing and Work Engagement of Information Workers. Under Review.

U₈ 2023 Under Review **Saha, K.**, Gupta, P., Mark, G., Kiciman, E., & De Choudhury, M. (2023). Observer Effect in Social Media Use. Under Review.

U₉ 2022 Under Review Hickman, L., **Saha, K.**, Yousuf, A., De Choudhury, M., & Tay, L. (2022). Twitter-based Job Satisfaction: A Macro-Level Investigation of the Concurrent Validity of Expressions of Pay and Supervision Satisfaction. Under Review.

U₁₀ 2022 Under Review Vincent, N., Liu, Y., **Saha, K.**, Chowdhury, F. A., Neves, L., Shah, N., & Bos, M. W. (2021). Predicting User States with Anonymous Activity Streams. Under Review.

U₁₁ 2021 Under Review Nepal, S., Martinez, G., Mirjafari, S., **Saha, K.**, Das Swain, V., Xu, X., Audia, P., De Choudhury, M., Dey, A. K., Striegel, A., & Campbell, A. T. (2021). A Survey of Passive Sensing in the Workplace. Under Review.

U₁₂ 2021 Under Review Thapa, S., Tay, L., **Saha, K.**, De Choudhury, M., & Das Swain, V. (2020). Do Affective Dynamic Features Predict Job Performance? Under Review.

U₁₃ 2019 Under Review Lin, S., Han, X., **Saha, K.**, Robles-Granda, P., & Chawla, N.V. (2019). M2Learn: A python library for multi-source data machine learning. Under Review.

Dissertation

2021 Georgia Tech **Saha, K.** (2021). Computational and Causal Approaches on Social Media and Multimodal Sensing Data: Examining Wellbeing in Situated Contexts. Doctoral dissertation, Georgia Institute of Technology, [Link](#).

Patents

- 2020 Bos, M. W., Liu, Y., **Saha, K.**, Shah, N., Neves, L., Vincent, N., & Chowdhury, F. A., Timing Advertising to User Receptivity (1)., *US Patent Filed, Dec'20*.
- 2020 Bos, M. W., Liu, Y., **Saha, K.**, Shah, N., Neves, L., Vincent, N., & Chowdhury, F. A., Timing Advertising to User Receptivity (2)., *US Patent Filed, Dec'20*.
- 2015 Patel, L., **Saha, K.**, Das, S., & Biswas, A., A System and Method for Sentiment Analysis of Text., *US Provisional Patent Filed, Aug'14, US Patent Filed, Aug'15*.
- 2015 Patel, L., **Saha, K.**, Das, S., & Biswas, A., A System and Method for scalable and continuous learning and annotation of data., *US Provisional Patent Filed, Mar'15*.
- 2014 Bose, A., **Saha, K.**, Das, S., & Biswas, N., A System and Method for Predicting Compliance Issues., *US Provisional Patent Filed, Feb'14*.

Experience

- Oct 2021 – **Senior Researcher**, *Microsoft Research*, Montreal.
I work closely with Fairness, Accountability, Transparency, and Ethics in AI (FATE) group. My projects have spanned understanding the harms and challenges of measuring wellbeing through passive sensing and data-driven approaches. I have conducted multiple studies in the space of workplace wellbeing.
- Aug 2016 – **Graduate Research Assistant**, *Georgia Tech*, School of Interactive Computing.
May 2021 Advised by Dr. Munmun De Choudhury, as a Ph.D. (Computer Science) student, I specialize in social computing. Broadly motivated in topics and methods related to computational social science and human-centered machine learning. In particular, my research interest involves social media sensing of mental wellbeing in situated communities, such as college campuses and workplaces.
- May 2020 – **Research Intern**, *Snap Research*.
Aug 2020 Advised by Dr. Maarten Bos, I conducted causal studies on understanding the effect of timing advertisements, and how people's momentary user states are associated with ad consumption on social media. This research is motivated to contribute towards better and privacy-preserving understanding of human behavior and improving content recommendation. This work led to a publication at ACM CHI 2021 [C₁₆].
- May 2019 – **Research Intern**, *Microsoft Research*, India.
Aug 2019 Advised by Dr. Amit Sharma, I conducted retrospective case-control based causal study in observational setting. In particular, we investigated the question of *what* factors lead to effective psychosocial outcomes in online mental health communities. We quantified individuals' psychosocial outcomes in an online mental health community, and then compared the social support based interventions received by individuals who improved the most (Case) against those who improved the least (Control). This work led to a publication at AAAI ICWSM 2020 [C₉].
- May 2018 – **Visiting Scholar**, *Max Planck Institute for Software Systems (MPI-SWS)*.
July 2018 Advised by Dr. Krishna P. Gummadi, I worked on the problem of how social media based advertising platforms enable advertisers to micro-target their audience in a malicious way. We experimentally studied how Facebook ads from the Russian IRA run prior to 2016 U.S. elections exploited Facebook's targeted advertising platform to target ads on divisive or polarizing topics (eg, immigration, race-based policing) at vulnerable sub-populations. This work led to a publication at ACM FAT* 2019 [C₄].
- May 2017 – **Research Intern**, *Fred Hutch*, Hutch Data Commonwealth.
July 2017 Advised by Dr. Naveen Ashish, I worked in the domain of biomedical data sciences and computational social science. I examined high dimensional machine learning using genomics data to predict the risk of Colorectal Cancer. I also worked on quantifying the 'impact' of tweets to analyze the outreach of Cancer Research information and awareness.

- Dec 2012 – **Senior Researcher**, *Abzooba*, X, NLP & Data Sciences R&D.
- Aug 2016 As the product development lead of XPresso, Abzooba's flagship product, I conceptualized techniques, and developed modules to extract information in an end-to-end automated, scalable, and efficient fashion. I worked on problems relating to NLP, machine learning, and predictive analytics, across the domains of finance, retail, and healthcare. I developed the Continuous Learning System (CLS), and led my team to win a Hackathon for Compliance Risk conducted by a U.S. retail giant where we developed the Compliance Risk Index (CRIX). My work was a part of three patents at Abzooba.
- NLP problems such as aspect based sentiment analysis, emotion categorization, document classification, semantic search, trending topics detection, ontology building, and so on.
 - NLP techniques like Semantic Role Labeling, Dependency Parsing, Word-Vectors, Topic Modeling, Latent Semantic Hashing.
 - Data Sciences problems like predicting compliance risk, member expenses, distributor costs, etc.
- Sep 2013 – **Visiting Faculty Member**, *Praxis Business School*.
- Jul 2014 Conducted courses on Big Data Analytics and Retail Analytics. Subjects included Hadoop, Map Reduce, Unix and Programming fundamentals, and Natural Language Processing.
- Aug 2012 – **Junior Research Associate**, *Infosys*, Infosys Labs, R&D.
- Nov 2012 Conceptualized & implemented an information extraction tool from unstructured financial reports. Contributed in the ideation of a semantic similarity-based recommendation system of research projects.
- May 2011 – **Research Intern**, *Siemens*, Corporate Technologies R&D.
- July 2011 Set up a Hadoop cluster of 30 computers, and installed Mahout and Katta for running jobs. Developed a tool for accessing Lucene indexes to search and analyze their content based on parameters.

Accepted Proposals and Grants

- 2022 Information Pathways on Telegram and How They Shape Perceptions Around National Issues, *Edson C. Tandoc, Jr., Roy Ka-Wei Lee, Navin Kumar, and Koustuv Saha*, Temasek Laboratories@NTU, Singapore, \$547,033.
- 2022 Investigating Interaction-Based Harms in AI Systems, *AJung Moon, Shalaleh Rismani, Q. Vera Liao, Alexandra Olteanu, Koustuv Saha, and Su Lin Blodgett*, MSR & Mila Collaboration, Montreal.
- 2022 On Supporting Workers Through Data-Driven Insights, *Koustuv Saha, Jina Suh, Shamsi T. Iqbal, Javier Hernandez, Judith Amores, Gonzalo Ramos, Kate Nowak, Mary Czerwinski*, Joint E&D and MSR (JEM).

Awards, Fellowships, & Highlights

- 2022 Recipient of Georgia Tech College of Computing Outstanding Dissertation Award (USD \$500).
- 2020 Recipient of the Snap Research Fellowship Award (USD \$10,000).
- 2020 Recipient of the GVU Foley Scholarship Award (USD \$5,000).
- 2020 Selected for CSCW 2020 Doctoral Consortium (Full Funding).
- 2020 Best Paper Honorable Mention at WristSense 2020 [W₈].
- 2019 Outstanding Study Design Paper Award at ICWSM 2019 [C₉].
- 2019 Finalist in Symantec Graduate Research Fellowship Award.
- 2014 Won Data Science Hackathon on Compliance Risk Prediction, organized by a U.S. Retail Giant.
- 2008 Qualified in Top 0.5% at IITJEE 2008 and Top 0.3% at AIEEE 2008.
- 2006 Awarded National Talent Search Examination (NTSE) Scholarship by NCERT, Govt. of India.

Talks, Panels, and Demos

- 2022 Examining Wellbeing with Social Media and Multimodal Sensing: Potentials and Next Steps, *Aalto University*.
- 2022 Panelist, *Mental Health and Social Media*, 8th International Workshop on Mining Actionable Insights from Social Networks, TheWebConf 2022.

- 2022 Panelist, *CHI Work: Symposium on Human-Computer Interaction for Work*, AI and worker wellbeing: A responsible AI perspective.
- 2021 Measuring Wellbeing in Situated Contexts with Social Media and Multimodal Sensing Data: Potentials and Next Steps, *MSR Montreal*.
- 2021 Computational and Causal Approaches on Social Media and Multimodal Sensing Data: Examining Wellbeing in Situated Contexts.
- o Microsoft Research, Redmond (Human Understanding and Empathy)
 - o National University of Singapore
 - o Sabarmati Young Researcher Seminar, IIT Gandhinagar
 - o University of South Carolina
 - o University of Illinois, Chicago
 - o Temple University
 - o Microsoft Research, India
 - o Adobe Research
 - o Drexel University
 - o Georgia State University
 - o University of Pittsburgh
 - o GVU Brown Bag
 - o Georgia Tech, Ubicomp
 - o Microsoft Applied Research Invited Talk Series: Rising Stars
 - o Microsoft Research, Montreal
- 2021 Panelist, *UGCL Affinity Group Social at EACL*.
- 2020 Social Media Reveals Psychosocial Effects of the COVID-19 Pandemic, *GVU Research Showcase*.
- 2020 AdverTiming Matters: Examining User Ad Consumption for Effective Ad Reallocation on Social Media, *Snap Research*.
- 2020 Computational and Causal Approaches on Social Media and Multimodal Data For Wellbeing, *TCS Innovation Research Labs*.
- 2019 A Social Media Study on The Effects of Psychiatric Medication Use, *Microsoft Research*.
- 2019 Tesserae: Measuring Role Ambiguity Using LinkedIn Data, *GVU Research Showcase*.
- 2019 Tesserae: Modeling Organizational Culture Using Glassdoor Data, *GVU Research Showcase*.
- 2019 A Social Media Study on The Effects of Psychiatric Medication Use, *GVU Research Showcase*.
- 2018 Tesserae: Multimodal Sensing To Model Individual Differences and Job Performance at Workplaces, *GVU Research Showcase*.
- 2017 Examining Colorectal Cancer Risk using SNPs, *Fred Hutch*.
- 2017 Using Social Media to Model Stress in College Campuses Around Violent Incidents, *GVU Research Showcase*.
- 2016 CampusLife: Understanding Student Mental Wellbeing with Multimodal Sensing, *GVU Research Showcase*.
- 2016 Using Facebook Ad Audience Estimates to Study Psychosis Awareness in the US, *GVU Research Showcase*.
- 2016 An Hybrid Approach for Knowledgebase Buildup and Lookup, *Georgia Tech, COC*.

Media Coverage

- 2022 Russian Election Interference Effectiveness, *Data Skeptic Podcast*, [Link](#).
- 2022 Understanding Stress Levels of Campus Shootings with ML, *Sustainable AI Podcast*, [Link](#).
- 2022 Are active shooter drills worth it?, *Vox*, [Link](#).
- 2022 Campaign Urges Users to Post Pictures of Psychiatric Medications, *Psychiatric News*, [Link](#).
- 2022 Uncertainty In The Workplace: Navigating LinkedIn Role Ambiguity, *Ethical Digital*, [Link](#).
- 2021 Wearable tech confirms wear-and-tear of work commute , *Science Daily*, [Link](#).
- 2020 Kovid-19 sosyal medyanın 'psikolojisini' etkiledi, *Sabah*, [Link](#).
- 2020 Is Everybody Doing . . . OK? Let's Ask Social Media: Researchers are looking at online behavior to gauge public mental health. The results aren't pretty., *The New York Times*, [Link](#).
- 2020 High levels of pandemic-induced anxiety, depression observed in social media posts., *CBC Radio*, [Link](#).
- 2020 Active shooter drills are meant to prepare students. But research finds 'severe' side effects., *NBC News*, [Link](#).
- 2020 Georgia Tech researchers find active shooter drills in schools may increase anxiety, depression for several months., *11Alive*, [Link](#).
- 2020 Study links active shooter drills in schools to increased depression and anxiety., *The Hill*, [Link](#).
- 2020 Study finds active shooter drills have negative impacts on students., *The Commonwealth Times*, [Link](#).
- 2020 New Machine Learning Method Amplifies 'Voice of the People' to Reveal Workplace Culture., *Georgia Tech College of Computing Press*, [Link](#).
- 2019 IC Researchers Awarded Outstanding Study Design Paper Award at ICWSM-19., *Georgia Tech School of Interactive Computing Press*, [Link](#).
- 2019 Researchers Use Social Media to Model Stress Following Incidents of Gun Violence on Campus., *Georgia Tech School of Interactive Computing Press*, [Link](#).
- 2018 Language Use on Social Media Could Provide an Unobtrusive Measure of Student Stress Levels Following Incidents of On-Campus Violence., *GVU Center*, [Link](#).

Student Mentorships

At Microsoft Research

- 2022 **Direct MSR Intern Mentorship.**
 - Anna Kawakami (PhD Student, CMU HCII): [U₂, U₁, W₁₁]
 - Shreya Chowdhary (BS, Olin College): [U₁, U₂]
- 2022 **Other MSR Intern Collaborations.**
 - Yasaman Sefidgar (PhD Student, University of Washington): [C₂₃, U₃]
 - Vedant Das Swain (PhD Student, Georgia Tech): [C₂₄]
 - Jaleh Mahdavi (PhD Student, Ryerson University): [U₄]
 - Harish Haresamudram (PhD Student, Georgia Tech): [U₅]
- 2022 **Other Mentorship/Collaborations.**
 - Yunhao Yuan (MS/PhD Student, Aalto University): [C₂₅]
 - Bhaskar Kotakonda (MS Student, Georgia Tech)
 - Shubham Agarwal (MS Student, Georgia Tech)
 - Sukriti Bhardwaj (BS Student, Georgia Tech)

At Georgia Tech

2016-2021 Graduate Students.

- Haomin Lin
- Shrija Mishra [J₁₆, W₈]
- Pranshu Gupta [J₁₆, J₁₇, J₁₈, W₈, U₆]
- Asra Yousuf [J₁₇, J₂₃, U₇]
- Manikanta D. Reddy [J₇, J₈, J₉, C₃, C₅, C₇, C₁₂]
- Benjamin Sugar [C₉]
- Jayant Jain [J₁₇]
- Jyoti Narang
- Sheryl Ratnam
- Kunal Agarwal
- Amelia Glaese [J₂₃]
- Andrea Hu [J₁₇]
- Dong Whi Yoo [C₆, C₇]
- Akshay Agarwal
- Sherry Yoo

2016-2021 Undergraduate Students.

- Caroline Ridley
- Sparsh Kudrimoti
- Nicholas Jaffe [C₉]
- Jordyn Seybolt [J₁₆, C₉]
- Sarah Yoo [C₉]
- Chaitanya Konjeti [C₉]
- Tushna Eduljee
- Yujia Gao
- Abhirup Ghosh
- Christin Avery Timmons
- Victor Renard Hill Jr.
- Sang-Chan Kim [J₈]
- Tahirah Ahmad
- Hemang Rajvanshy [J₇, C₁₂]
- Soo Aah Moon
- James O'Connor

Miscellaneous

Skills and Interest Computational Social Science, Social Computing, FATE, Human-centered Machine Learning, Causal Inference, HCI, Mental Health, Wellbeing, Natural Language, Time Series, Statistical Modeling, Data Science

Editing (Journal) Frontiers in Digital Health

Reviewing (Journals) Nature Scientific Reports, Science Advances, PLOS One, Communications of ACM (CACM), NPJ Mental Health Research, J. Medical Internet Research (JMIR), IEEE Trans. Affective Computing (TAFF), ACM Trans. Computer-Human Interaction (TOCHI), J. Psycholinguistic Research (JOPR), ACM Trans. Social Computing (TSC), ACM Trans. Web (TWEB), J. Homosexuality, J. Family Violence, EPJ Data Science, Information Processing & Management (IPM), Early Intervention in Psychiatry, International Journal of Psychophysiology (INTPSY), PACM Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT), ACM Digital Threats (DTRAP), Discourse Processes, Mental Health & Prevention, BMC Medical Informatics and Decision Making, Frontiers in Public Health, ACM Computing Surveys

Reviewing (Conferences) ACM CSCW (2017, 2018, 2019, 2020, 2021*, 2022), ACM CHI (2017, 2018, 2019, 2020*, 2021*), EMNLP (2021), WebConf (2019, 2020, 2021, 2022), AAAI ICWSM (2019, 2020, 2021, 2022), ACII (2019), ACL-IJCNLP (2020, 2021), EACL-HCINLP (2021) (* [Special Recognition for Outstanding Reviews](#))

AE/SPC/PC Member ACM CHI (2023), ACM CSCW (2022, 2023), AAAI ICWSM (2019, 2020, 2021, 2022, 2023), ACM FAccT (2023), WebConf (2020, 2021, 2022, 2023), ACM WebSci (2020, 2021, 2022), ASONAM (2019), EMNLP W-NUT (2019, 2020), ACII ML for Mental Health Workshop (2019)

Org. Comm. Web Chair (AAAI ICWSM 2020), Virtual Conference Chair (AAAI ICWSM 2022), Hybrid Chair (ACM CSCW 2023)

Programming Python, R, Java, C, C#, Bash, HTML, MySQL, MongoDB, BigQuery

Languages English, Bengali, Hindi

References

Munmun De Choudhury, PhD.

Associate Professor, School of Interactive Computing, Georgia Tech
munmund@gatech.edu

Susan Dumais, PhD.

Technical Fellow and Lab Director, Microsoft Research, New York, New England, and Montreal
sdumais@microsoft.com

Gregory D. Abowd, DPhil.

Dean of the College of Engineering and Professor of Electrical and Computer Engineering, Northeastern University
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Senior Principal Researcher, Microsoft Research, Redmond
emrek@microsoft.com

Gloria Mark, PhD.

Chancellor's Professor, Department of Informatics, University of California, Irvine
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Mary Czerwinski, PhD.

Partner Research Manager, Microsoft Research, Redmond and Affiliate Professor, University of Washington
marycz@microsoft.com

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alexandra.olteanu@microsoft.com

Q. Vera Liao, PhD.

Principal Researcher, Microsoft Research, Montreal
veraliao@microsoft.com

Maarten Bos, PhD.

Lead Research Scientist and Manager, Snap Research
maarten@snap.com