Mashfiqui Rabbi

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Research Interest

General	Mobile health, Mobile computing, Machine learning, Data Science, Behavior change, Human-computer Interaction
Specific	Just-in-time adaptive interventions (JITAIs), Intervention design, Activity recognition, User-centered design, Causal inference on time-varying treatments, User-engagement

Education

2017-now	**Post-doctoral fellow** at Statistics Department, *Harvard University* *Advisor*: Susan Murphy
2016-2017	**Post-doctoral fellow** at Statistics Department, *University of Michigan, Ann Arbor* *Advisors*: Susan Murphy, Ambuj Tewari, Predrag Klasnja
2011-2016	**Ph.D.** in Information Science, *Cornell University* *Committee*: Tanzeem Choudhury (chair), Deborah Estrin, Dan Cosley Awarded Masters degree on October 2014 Graduated April 2016
2009-2011	**Ph.D. Student** in Computer Science, *Dartmouth College* *Advisor*: Tanzeem Choudhury Transferred to Cornell University with advisor and continued PhD
2003-2007	**B.Sc.** in Computer Science and Engineering, *Bangladesh Uni. of Eng. and Tech.* *CGPA*: 3.74 out of 4.00, *Major*: 3.81 *Thesis Advisor*: Saidur Rahman

Work Experience

2011-2016	**Research Assistant** in Department of Information Science at *Cornell University*
2014	**Summer Intern** at *Intel Labs* *Advisors*: Lama Nachman, Hong Lu
2013	**Teaching Assistant** in Department of Information Science at *Cornell University*
2012	**Summer Intern** at *AT&T Labs Research* *Advisors*: Emiliano Miluzzo, Suhrid Balakrishnan
2009-2011	**Research Assistant** in Department of Computer Science, *Dartmouth College* *Advisors*: Tanzeem Choudhury, Andrew Campbell
2010	**Teaching Assistant** in Department of Computer Science at *Dartmouth College*
2008-2009	**Quantitative Software Developer** in *Stochastic Logic Ltd., Dhaka, Bangladesh* *Advisor*: Arif Dowla, Ph.D. in Mathematics, UCSD

Publications

Peer reviewed Journals, Conference papers, and Book chapters

2018

M. Rabbi, M. S. Aung, G. Gay, M. C. Reid, and T. Choudhury. Feasibility and acceptability of mobile phone–based auto-personalized physical activity recommendations for chronic pain self-management: Pilot study on adults. *J Med Internet Res*, 20(10):e10147, Oct 2018

M. Rabbi, M. Philyaw Kotov, R. Cunningham, E. E. Bonar, I. Nahum-Shani, P. Klasnja, M. Walton, and S. Murphy. Toward increasing engagement in substance use data collection: Development of the substance abuse research assistant app and protocol for a microrandomized trial using adolescents and emerging adults. *JMIR Res Protoc*, 7(7):e166, Jul 2018

2017

M. Rabbi, M. H. Aung, and T. Choudhury. Towards health recommendation systems: an approach for providing automated personalized health feedback from mobile data. In *Mobile Health*, pages 519–542. Springer, 2017

E. K. Choe, S. Abdullah, M. Rabbi, E. Thomaz, D. A. Epstein, F. Cordeiro, M. Kay, G. D. Abowd, T. Choudhury, J. Fogarty, et al. Semi-automated tracking: A balanced approach for self-monitoring applications. *IEEE Pervasive Computing*, 16(1):74–84, 2017

2016

M. Aung, F. Alquaddoomi, C.-K. Hsieh, M. Rabbi, L. Yang, J. Pollak, D. Estrin, and T. Choudhury. Leveraging multi-modal sensing for mobile health: a case review in chronic pain. 2016

2015

M. Rabbi, M. H. Aung, M. Zhang, and T. Choudhury. Mybehavior: Automatic personalized health feedback from user behavior and preference using smartphones. In *Ubicomp*, 2015

M. Rabbi, J. Costa, F. Okeke, M. Schachere, M. Zhang, and T. Choudhury. An intelligent crowd-worker selection approach for reliable content labeling of food images. In *Wireless Health*, 2015

M. Rabbi, A. Pfammatter, M. Zhang, B. Spring, and T. Choudhury. Automated personalized feedback for physical activity and dietary behavior change with mobile phones: A randomized controlled trial on adults. *JMIR mHealth and uHealth*, 3(2):e42, May 2015

2014

P. Adams, M. Rabbi, T. Rahmant, M. Matthews, A. Voida, G. Gay, T. Choudhury, and S. Voida. Towards personal stress informatics: Comparing minimally invasive techniques for measuring daily stress in the wild. In *Pervasive Health*, 2014

N. D. Lane, M. Lin, M. Rabbi, X. Yang, H. Lu, G. Cardone, S. Ali, A. Doryab, E. Berke, A. T. Campbell, et al. Bewell: Sensing sleep, physical activities and social interactions to promote wellbeing. *Mobile Networks and Applications*, pages 1–15, 2014

2012

H. Lu, M. Rabbi, D. Frauendorfer, M. S. Mast, G. T. Chittaranjan, A. T. Campbell, D. Gatica-Perez, and T. Choudhury. Stresssense: Detecting stress in unconstrained acoustic environments using smartphones. In *Proceedings of the 2012 ACM Conference on Ubiquitous Computing*, pages 351–360. ACM, 2012

M. Lin, N. D. Lane, M. Rabbi, X. Yang, H. Lu, G. Cardone, S. Ali, A. Doryab, E. Berke, A. T. Campbell, et al. Bewell+: multi-dimensional wellbeing monitoring with community-guided user feedback and energy optimization. In *Proceedings of the conference on Wireless Health*, page 10. ACM, 2012

2011

M. Rabbi, S. Ali, T. Choudhury, and E. Berke. Passive and in-situ assessment of mental and physical well-being using mobile sensors. In *Proc. 13th ACM Intl Conf. Ubiquitous Computing*, pages 385–394, 2011

N. D. Lane, M. Rabbi, M. Lin, X. Yang, H. Lu, S. Ali, A. Doryab, E. Berke, T. Choudhury, and A. T. Campbell. Bewell: A smartphone application to monitor, model and promote well-being. In *5th International Conference on Pervasive Computing Technologies for Healthcare (PervasiveHealth2011)*, 2011

E. M. Berke, T. Choudhury, S. Ali, and M. Rabbi. Objective measurement of sociability and activity: mobile sensing in the community. *The Annals of Family Medicine*, 9(4):344–350, 2011

2010

A. Campbell, T. Choudhury, S. Hu, H. Lu, M. K. Mukerjee, M. Rabbi, and R. D. Raizada. Neurophone: brain-mobile phone interface using a wireless eeg headset. In *Proceedings of the second ACM SIGCOMM workshop on Networking, systems, and applications on mobile handhelds*, pages 3–8. ACM, 2010

M. J. Alam, M. Rabbi, and M. S. Rahman. Upright drawings of planar graphs on three layers. *Journal of Applied Mathematics & Informatics*, 28(56):1347–1358, 2010

M. J. Alam, M. A. H. Samee, M. Rabbi, and M. S. Rahman. Minimum-layer upward drawings of trees. *J. Graph Algorithms Appl.*, 14(2):245–267, 2010

2008

M. J. Alam, M. A. H. Samee, M. M. Rabbi, and M. S. Rahman. Upward drawings of trees on the minimum number of layers. In *WALCOM: Algorithms and Computation*, pages 88–99. Springer, 2008

Lightly peer reviewed Abstracts, Posters, and Workshop papers

2017

M. Rabbi, M. Philyaw-Kotov, J. Lee, A. Mansour, L. Dent, X. Wang, R. Cunningham, E. Bonar, I. Nahum-Shani, P. Klasnja, et al. Sara: a mobile app to engage users in health data collection. In *Proceedings of the 2017 ACM International Joint Conference on Pervasive and Ubiquitous Computing and Proceedings of the 2017 ACM International Symposium on Wearable Computers*, pages 781–789. ACM, 2017

2015

M. Rabbi, T. Caetano, J. Costa, S. Abdullah, M. Zhang, and T. Choudhury. Saint: A scalable sensing and inference toolkit (poster). In *Hotmobile*, 2015

2014

M. Rabbi and S. I. Ahmed. Sensing stress network for social coping. Accepted for CSCW Interactive Poster Session, 2014

2013

S. Voida, M. Matthews, S. Abdullah, M. C. Xi, M. Green, W. J. Jang, D. Hu, J. Weinrich, P. Patil, M. Rabbi, et al. Moodrhythm: tracking and supporting daily rhythms. In *Proceedings of the 2013 ACM conference on Pervasive and ubiquitous computing adjunct publication*, pages 67–70. ACM, 2013

S. Voida, T. Choudhury, G. Gay, M. Matthews, P. Adams, M. Rabbi, J. Pollak, M. C. Chi, M. Green, H. Lu, N. D. Lane, M. Lin, and A. T. Campbell. Personal informatics can be stressful: Collecting, reflecting, and embedding stress data in personal informatics. In *CHI 2013 workshop on Personal Informatics in the Wild: Hacking Habits for Health & Happiness, Paris, France,*, April 2728, 2013

M. Rabbi, C. wen Yuan, and K. Kaipaien. An exploratory study to identify opportune moments in everyday life to promote healthy eating. Poster in ISBNPA, 2013

Awards and grants

- Pilot grant from Methodology Center at Penn State University, 2019 (in progress)
- Pilot grant from Michigan Institute for Clinical & Health Research based on SARA, 2018
- Co-investigator of pilot grant from Translational Research Institute for Pain in Later Life on MyBehavior, 2015
- Part of the winning team of $100K Heritage Open mHealth Challenge, 2013
- Most helpful summer intern (among 60 student-interns) at AT&T Labs Research, 2012
- Dean's list on the year 2004 at Bangladesh Uni. of Engr. & Tech.

Talks

- SARA: Substance Abuse Research Assistant at Prevention Center of *Penn State University*, 2018
- SARA: Substance Abuse Research Assistant at Methodology Center of *Society of Clinical Trials, Portland, Oregon*, 2018
- SARA: Substance Abuse Research Assistant at Methodology Center of *Penn State University*, 2017
- SARA: Substance Abuse Research Assistant at Statistics PhD student seminar at *Harvard University*, 2017
- MyBehavior at Methodology Center of *Penn State University*, 2017
- MyBehavior at HCI Seminar of *University of Rochester*, 2013
- MyBehavior at Information Science Brown-bag Series at *Cornell University*, 2013
- Mobile Phone Sensing at the Computer Science Seminar at *Bangladesh Uni. of Engr. & Tech.*, 2012
- Passive Assessment of Mental and Physical Well-being at *Ubicomp*, 2011
- Passive Assessment of Mental and Physical Well-being at Information Science Breakfast Series in *Cornell University*, 2011

Selected Press Coverage

- A Health-Tracking App You Might Actually Stick With, MIT Technology Review, 2015
- Cornell researchers use personalized algorithm in weight loss app, MobiHealth News, 2015
- This app helps you burn calories without radically changing your routine., Mashable, 2015
- Virtual Companion, AT&T Innovation Showcase "Connecting Your World", 2013
- Teaching old microphones new tricks, The Economist, 2013
- Smartphone that feels your strain, New Scientist, 2012

- Voice-Stress Software Is Put to the Test, PhysOrg and ACM Tech, 2012
- Monitoring Mental Health from Your Pocket, Cornell Chronicle, 2011
- Neural Phone is featured in The Cyborg in us all, the NYTimes Magazine, 2011
- An App That Reads Your Feelings Through Your Voice, Fast Co's Co.Exist piece, 2011
- Cellphone Apps to Track Our Health, EarthSky, 2011
- Mobile Phone Mind Control, Technology Review, 2010

Students advised

- Brian Lin, Undergraduate, Information Science, Cornell University, *Fall 2011, Spring 2012, Fall 2012*
- Jan Cardenas, Undergraduate, Information Science, Cornell University, *Fall 2012*
- Chantelle Farmer, Masters, Information Science, Cornell University, *Spring 2013*
- Thiago Caetano, Undergraduate visiting student from Universidade Estadual de Campinas at Cornell University, *Summer 2013*
- Max Schachere, High School student from Hawken School, Ohio, *Summer 2013, Summer 2014*
- Shankar Athinarayanan, Undergraduate, Computer Science, Cornell University, *Fall 2013, Spring 2014, Fall 2014, Spring 2015*
- Lily Gao, UX designer, Undergraduate, Information Science, Cornell University, *Fall 2014*
- Shreya Sitaraman, Undergraduate, Information Science, Cornell University, *Summer 2014*
- Jiaming Zhang, Undergraduate, School of Human Ecology, Cornell University, *Summer 2015, Fall 2015*
- Xian Zhang, Masters, Information Science, Cornell University, *Spring 2015, Summer 2015, Fall 2015, Spring 2016*
- Rohit Biswas, Undergraduate, Information Science, Cornell University, *Summer 2015, Fall 2015, Spring 2016*
- Minghao Li , Masters, Information Science, Cornell University, *Summer 2015, Fall 2015, Spring 2016*
- Zhe Lin , Masters, Information Science, Cornell University, *Summer 2015, Fall 2015, Spring 2016*
- Kelly Hall, Undergraduate, Statistics, Unviersity of Michigan, *Fall 2016*
- Bess Rothman, Undergraduate, Statistics, Unviersity of Michigan, *Summer 2017, Fall 2017*
- Katherine Li, Undergraduate, Statistics, Unviersity of Michigan, *Fall 2016, Spring 2017, Summer 2017, Fall 2017, Spring 2018*

Reference

- Tanzeem Choudhury, Associate Professor at Department of Information Science, Cornell University
- Susan Murphy, Professor at Department of Statistics and Computer Science, Harvard University

- Andrew Campbell, Professor at Computer Science, Dartmouth College

- Maureen Walton, Professor at Department of Psychiatry, University of Michigan, Ann Arbor

- Predrag Klasnja, Assistant Professor at School of Information Science, University of Michigan, Ann Arbor

Last updated: November 17, 2018