

Mike A. Merrill

PHD STUDENT · PAUL G. ALLEN SCHOOL OF COMPUTER SCIENCE AND ENGINEERING

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Education

University of Washington

PHD COMPUTER SCIENCE

- Advisor: Tim Althoff

Seattle, WA

September 2019 - present

Cornell University

BS INFORMATION SCIENCE

- Magna Cum Laude
- Undergrad Research Advisor: Tanzeem Choudhury

Ithaca, NY

August 2013 - May 2017

Other Research Experience

- 2023 - Now **Google**, Student Researcher, Consumer Health Research - Agents for Tabular Data
- 2022 **Apple**, PhD ML Research Intern, Health AI - Large Scale Pretraining with Sensor Data
- 2016-2019 **HealthRhythms**, Data Scientist (Second Full Time Employee)
- 2015-2017 **Cornell University**, Undergraduate Research Assistant, Advised by Tanzeem Choudhury
- 2016 **Carnegie Mellon University**, Undergraduate Research Assistant, Advised by Anind Dey

Publications

CONFERENCE AND JOURNAL PAPERS

- **Mike A. Merrill**, Esteban Safranchik, Arinbjorn Kolbeinsson, Piyusha Gade, Ernesto Ramirez, Ludwig Schmidt, Luca Foshchini, and Tim Althoff. Homekit2020: A Benchmark for Time Series Classification on a Large Mobile Sensing Dataset with Laboratory Tested Ground Truth of Influenza Infections. *CHIL (Published in TMLR)*, 2023
- **Mike A. Merrill** and Tim Althoff. Self-supervised Pretraining and Transfer Learning Enable Flu and COVID-19 Predictions in Small Mobile Sensing Datasets. *CHIL (Published in TMLR)*, 2023
- Xuhai Xu, Han Zhang, Yasaman Sefidgar, Yiyi Ren, Xin Liu, Woosuk Seo, Jennifer Brown, Kevin Kuehn, **Mike A. Merrill**, Paula Nurius, Shwetak Patel, Tim Althoff, Margaret E. Morris, Eve Riskin, Jennifer Mankoff, and Anind K. Dey. Globem dataset: Multi-year datasets for longitudinal human behavior modeling generalization, 2022
- Ge Zhang, **Mike A. Merrill***, Yang Liu, Jeffrey Heer, and Tim Althoff. Coral: Code representation learning with weakly-supervised transformers for analyzing data analysis. In *EPJ Data Science*, 2022
- **Mike A. Merrill**, Ge Zhang, and Tim Althoff. Multiverse: Mining collective data science knowledge from code on the web to suggest alternative analysis approaches. *KDD*, 2021
- Dror Ben-Zeev, Rachel Brian, Rui Wang, Weichen Wang, Andrew T. Campbell, Min S. H. Aung, **Michael Merrill**, Vincent W. S. Tseng, Tanzeem Choudhury, Marta Hauser, John M. Kane, and Emily A. Scherer. Cross-Check: Integrating self-report, behavioral sensing, and smartphone use to identify digital indicators of psychotic relapse. *Psychiatric Rehabilitation Journal*, 2017
- Rui Wang, Min S. H. Aung, Saeed Abdullah, Rachel Brian, Andrew T. Campbell, Tanzeem Choudhury, Marta Hauser, John Kane, **Michael Merrill**, Emily A. Scherer, Vincent W. S. Tseng, and Dror Ben-Zeev. CrossCheck:

toward passive sensing and detection of mental health changes in people with schizophrenia. In *Ubicomp*. ACM, September 2016

- Vincent W. S. Tseng, **Michael Merrill**, Franziska Wittleder, Saeed Abdullah, Min Hane Aung, and Tanzeem Choudhury. Assessing mental health issues on college campuses: Preliminary findings from a pilot study. In *UbiComp workshop on Mental Health and Well-being: Sensing and Intervention*, 2016

* denotes co-first author

PREPRINTS

- **Mike A. Merrill** and Tim Althoff. Transformer-based behavioral representation learning enables transfer learning for mobile sensing in small datasets. <https://arxiv.org/abs/2107.06097>, 2021
- Momin M. Malik, Afsaneh Doryab, **Michael Merrill**, Jürgen Pfeffer, and Anind K. Dey. Can Smartphone Co-locations Detect Friendship? It Depends How You Model It. <https://arxiv.org/abs/2008.02919>, 2020

POSTERS

- Ellen Frank, **Michael Merrill**, Hane Aung, Claudio Soares, Sidney Kennedy, Mark Matthews, David Kupfer, Aleksandra Lalovic, and Tanzeem Choudhury. Sensing depression: Using smartphone sensors to predict changes in depression severity, 2017
- Ellen Frank, **Michael Merrill**, Hane Aung, Claudio Soares, Sidney Kennedy, Mark Matthews, David Kupfer, Aleksandra Lalovic, and Tanzeem Choudhury. Continuous behavioral data as a potential depression biomarker, 2016

Awards, Fellowships, & Grants

2019	Corin Anderson Endowed Fellowship , UW CSE	\$ 20,000
2017	Excellence in Research , Cornell University Department of Information Science	
2014	Big Red Idea , CU Tonight	\$ 1,000
	Pitch Festival Finalist Travel Grant , RECESS	\$ 1,000

Outreach & Professional Development

SERVICE AND OUTREACH

- 2023 **NeurIPS**, Reviewer, Deep Generative Models for Health Workshop
- 2023 **ICLR**, Reviewer, Time Series Representation Learning for Health Workshop
- 2021, 2022 **KDD**, Reviewer
- 2021 **CSE Graduate Admissions**, Data Science Area Chair
- 2020 **Graduate Liaison**, Faculty Recruitment Committee
- UW CSE Pre-Application Review Service**, Reader
- CSE Prospective Students Committee**, Grad Student Panel Coordinator

Presentations

- Summer 2021 **KDD 2021 “MULTIVERSE”**, Remote
- Evidation Health “Transfer Learning for Behavioral Data”**, Remote
- Spring 2018 **MassChallenge HealthTech Finale**, Boston, MA
- Fall 2017 **Results International “AI and Analytics in Healthcare” Panel**, New York, NY

Teaching Experience

Fall 2021 **CSE 481DS: Data Science Capstone**, TA
Fall 2020 **CSE 481DS: Data Science Capstone**, Head TA

Mentorship

2019-2020 **Jacopo Mocellin**, University of Trento, now at University of Zurich
2019-2020 **Ge Zhang**, Peking University, now at UMich iSchool