Jixin Li

Khoury College of Computer Sciences, Northeastern University
177 Huntington Ave, Boston, MA 02115
li.jix@northeastern.edu
Website: https://jixinli.info/

RESEARCH INTERESTS

Experience sampling, mobile health, human-computer interaction, machine learning. Summary: developing sustainable, adaptive ecological momentary assessment methods and just-in-time adaptive interventions using mobile and wearable technologies.

EDUCATION

Northeastern University, Boston, MA 09/2019-05/2026
Ph.D. in Personal Health Informatics
Advisor: Prof. Stephen Intille

Columbia University, New York City, NY 08/2016-12/2017
M.A. in Statistics

University of Michigan, Ann Arbor, MI 08/2012-05/2014
B.A. in Psychology, minor in Applied Statistics, University Honor

Renmin University of China, Beijing, P.R.China 08/2010-07/2012
Major in Applied Psychology and transferred to the University of Michigan

PUBLICATIONS

Ponnada, A., Wang, S. D., **Li, J.**, Wang, W. L., Dunton, G. F., Hedeker, D., Intille, S. S. (2025). Longitudinal User Engagement with Microinteraction Ecological Momentary Assessment (EMA). Proceedings of the ACM on interactive, mobile, wearable and ubiquitous technologies, 9(3), 1-27.

Prochnow, T., Wang, W. L., Wang, S., **Li, J.**, Rothman, A. J., Intille, S. S., ... Dunton, G. F. (2025). Understanding Longitudinal Ecological Momentary Assessment Completion: Results From 12 Months of Burst Sampling in the TIME Study. JMIR mHealth and uHealth, 13(1), e67117.

Cho YW, Chow S-M, **Li, J.**, Wang W-L, Wang S, Chinchilli VM, Intille SS, Dunton GF. (In Press) Understanding Within- and Between-Individual Compliance in mHealth: A Joint Modeling Approach to Non-Random Missingness JMIR Mhealth Uhealth.

Crosley-Lyons, R., **Li, J.**, Wang, W.L., Wang, S.D., Huh, J., Bae, D., Intille, S.S. and Dunton, G.F., 2025. Exploring person-centred sleep and rest–activity cycle dynamics over 6 months. Journal of Sleep Research, p.e14471.

Li, J., Ponnada, A., Wang, W.L., Dunton, G. and Intille, S., 2024. Ask Less, Learn More: Adapting Ecological Momentary Assessment Survey Length by Modeling Question-Answer Information Gain. Proceedings of the ACM on interactive, mobile, wearable and ubiquitous technologies, 8(4), pp.1-32.

Wang, W. L., **Li, J.**, Wang, S. D., Rothman, A., Intille, S. S., Dunton, G. F. (2024, April). Prevalence of physical activity maintenance across a 12-month study: Comparison of accelerometer indicators. Annals of Behavioral Medicine, Vol. 58, pp. S130-S130.

Dunton, G.F., Wang, W.L., **Li, J.**, Hedeker, D., Intille, S.S. and Rothman, A.J., 2024. Developing a Framework to Evaluate the Validity of Longitudinal Accelerometer-Based Indicators of Physical Activity Maintenance. Journal of Physical Activity and Health, 21(10), pp.961-962.

Le, H., Lakshminarayanan, R., **Li, J.**, Mishra, V. and Intille, S., 2024. Collecting Self-reported Physical Activity and Posture Data Using Audio-based Ecological Momentary Assessment. Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies, 8(3), pp.1-35.

Ponnada, A.*, **Li, J.***, Wang, S., Wang, W.L., Do, B., Dunton, G.F. and Intille, S.S., 2022. Contextual Biases in Microinteraction Ecological Momentary Assessment (μEMA) Non-response. Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies, 6(1), pp.1-24. **Distinguished Paper Award (DPA) at the UbiComp/ISWC 2023.**

CONFERENCE POSTERS & PRESENTATIONS

Wang, W.L., **Li, J.**, Intille, S., Hedeker, D., & Dunton, G. Using Intraindividual Means and Variances from Ecological Momentary Assessment Data as Predictor Variables: Comparing Standard Computational Formulas to Mixed-Effects Location-Scale Model Estimates. Special Issue of the Journal of Behavioral Medicine on Data Analysis for Behavioral Medicine.

Wang, W-L., **Li, J.**, Wang, S., Rothman, A.J., Intille, S.S., Dunton, G.F. (March 2024) Prevalence of Physical Activity Maintenance Across a 12-Month Study: Comparison of Accelerometer Indicators. Symposium to be presented at: The Annual Meeting Scientific Sessions of the Society of Behavioral Medicine, Philadelphia, PA, USA.

Prochnow, T., Wang, W-L., Wang, S., **Li, J.**, Intille, S., Hedeker, D., & Dunton, G. (May 20-23, 2024). Understanding ecological momentary assessment compliance in a 12- month multi-measurement burst sampling design in the TIME study. Accepted as an oral presentation at the 2024 International Society of Behavioral Nutrition and Physical Activity Meeting, Omaha, NE. **SIG award at the International Society of Behavioral Nutrition and Physical Activity (ISBNPA) 2024.**

Volz, S. C., Wang, S., **Li, J.**, Wang, W.L., Dunton, G. F., Intille, S. S., & Rothman, A. J. (2023, April) Affectively-charged motivations for physical activity and their relation to physical activity engagement. Poster presented at the 44th annual convention of the Society of Behavioral Medicine, Phoenix, AZ.

Wang, W.L., Shirlene Wang, Chih-Hsiang Yang, **Jixin Li**, Intille, S., Dunton, G. F. Associations of smartphone usage with average day level and day-to-day variability of mood in emerging adults. Poster presented at the 44th Annual Meeting & Scientific Sessions of the Society of Behavioral Medicine (April 26-29, 2023; Phoenix, AZ).

Crosley-Lyons, R., **Li, J.**, Wang. W-L., Wang, S., Huh, J., Bae., D., Intille, S., Dunton, G.F., (March 2023) Exploring within-person Circadian Rest-activity Cycle Rhythm Dynamics over Six Months: A Latent Transition Analysis. Poster presented at: The Annual Meeting Scientific Sessions of the Society of Behavioral Medicine, Philadelphia, PA, USA.

Volz, S., Wang, S., **Li, J.**, Wang. W-L., Dunton, G.F., Intille, S., Rothman, A.J. (March 2023) Effects of Affective Motivation and Deliberation on Subsequent Day- and Hour-Level Physical Activity Engagement. Poster presented at: The Annual Meeting Scientific Sessions of the Society of Behavioral Medicine, Philadelphia, PA, USA.

OPEN-SOURCE SOFTWARE & TOOLS

MixWILD: mixed model analysis with intensive longitudinal data

- MixWILD is a Java-based desktop application for examining the effects of variance and slope of time-varying variables in intensive longitudinal data, especially the ones collected using ecological momentary assessments.
- The software has enabled behavioral researchers to answer novel research questions using intensive longitudinal data and led to at least 9 influential publications in behavioral medicine.

Python package for annotating location data with OpenStreetMap point-of-interest tags

- The Python package allows researchers to use geospatial data to add an additional layer of context information from OpenStreetMap databases to raw location coordinates automatically and at scale.

ACADEMIC SERVICE

Peer Review

- Conference on Human Factors in Computing Systems (CHI)
- Journal of Physical Activity Health (JPAH)

Head Teaching Assistant at Northeastern University 9/2024-12/2024

- Independently designed and taught lectures for a 60-student senior-level machine learning course on deep learning for sequential data modeling.
- Developed and presented hands-on tutorials on PyTorch and cluster computing to support students' practical understanding of deep learning implementation and scalable model training.

WORK EXPERIENCES

Data Analyst at Learnable, Inc., Boston, MA 10/2017-10/2018

Real-time pricing support for transportation delay insurance:

- Supported pricing for transportation delay insurance by predicting delay risk using ML models and scraping weather data (python).

Built classification models to predict hierarchical labels:

- Implemented multi-level SVM models to assign knowledge labels to high school maths and physics exercises (python Jupyter notebook).

Survey Data Analyst at AsiaEAP Consulting Co., Shanghai, China 2015-2016

- Wrote organizational mental well-being report by conducting scale survey and group interview to client companies in labor intensive industry.
- Collected prevailing scales on stress in the workplace and compiled questionnaires customized for clients, including Shanghai Volkswagen, Qunar.com.

PROGRAMMING AND TOOLS

Python, R, Java, SQL, Android app development, Git, AWS, cluster computing

SCHOLARSHIPS & AWARDS

Distinguished Paper Award (DPA) at UbiComp/ISWC 2023.

SIG award at ISBNPA 2024.

University Honors, University of Michigan, 2014.

University Scholarship, Renmin University of China, 2012.