Curriculum Vitae – June 10, *2020*

Qu Tang

Ph.D. Candidate
Department of Electrical and Computer Engineering
Northeastern University
927V-177
360 Huntington Ave
Boston, MA 02115 USA
617-320-1212
tang.q@northeastern.edu
https://qutang.dev
mHealth Research Group: https://mhealthgroup.org
Google Scholar: http://tiny.cc/googlescholar-qutang
Microsoft academic: http://tiny.cc/msacademic-qutang
ORID: https://orcid.org/0000-0001-5415-0205
Linkedin: https://linkedin.com/in/qutang
Github: https://github.com/qutang

Research Interests

Personal health informatics; computational sensing, applied machine learning for preventive health care; interactive machine learning; interpretable machine learning; data visualization; big data engineering; sensor-enabled mobile health technologies.

Education

Northeastern University, Boston, MA US
mHealth Research Group
Ph.D. Computer Engineering (In-progress)
Area of specialization: interactive machine learning, interpretable machine learning, activity recognition, wearable sensing

Northeastern University, Boston, MA US
mHealth Research Group
M.S. in Electrical Engineering (May 2013)
Thesis title: Automatic smoking detection with wrist accelerometers
Advisor: Dr. Stephen Intille
Area of specialization: digital signal processing, activity recognition, applied machine learning
Courses: Digital Signal Processing, Computer Vision, Machine Learning, Linear System Analysis, Computer Simulation and Evaluation, Mobile Application Development in Android, Adaptive Filtering, Time Series Analysis

University of Electronic Science and Technology of China, Chengdu, Sichuan C.N.
Department of Optoelectronic Science and Technology
Scholarships: National Scholarship of China (2007-2009)

Professional Appointments and Research Experience

Northeastern University, Boston, MA US
(January 2013-)
Research assistant, I.T. administrator, mHealth Research Group, Khoury College of Computer Sciences & Dept. of Health Sciences, Bouvé College of Health Sciences
Research on topics related to applied machine learning for health technologies, activity recognition with wearable sensors, mobile sensing, ubiquitous computing. Mentoring of graduate and undergraduate students. I.T. Management.

Schepens Eye Research Institute, Boston, MA US
(December 2011-August 2012)
Research engineer, Cooperative education (Coop), Vision Rehabilitation Laboratory
Software development on eye-tracking systems for vision rehabilitation technologies.

Service (Editing and Reviewing)

Conference and Journal Reviewer (2013-present)

- Reviews for IEEE Sensors, ACM IMWUT.

Service (Other Northeastern)

Coordinator of PHI Seminar Speaker Series (September 2014-December 2014)

Service (Open source community)

Author and Maintainer

- "MIMSunit" algorithm (R Package), "MUSS" algorithm (Python Package)

Contributor

- "Signaligner Pro" data visualization tool (Python and web program)

Publications in Refereed Journals

Tang, Q., John, D., Thapa-Chhetry, B., Arguello, D.J. and Intille, S., 2020. Posture and Physical Activity Detection: Impact of Number of Sensors and Feature Type. Medicine & Science in Sports & Exercise. Preprint.

John, D., Tang, Q., Albinali, F., and Intille, S., 2019. An Open-Source Monitor-Independent Movement Summary for Accelerometer Data Processing. Journal for the Measurement of Physical Behaviour, 2(4), pp.268-281.

Henwood, B., Redline, B., Dzubur, E., Madden, D., Rhoades, H., Dunton, G., Rice, E., Semborski, S., Tang, Q. and Intille, S., 2019. March. Investigating health risk environments for in housing programs for transition-aged youth. Annuals of Behavioral Medicine, 53, pp. S336-S336.

Houston, K.E., Bowers, A.R., Fu, X., Liu, R., Goldstein, R.B., Churchill, J., Wiegand, J.P., Soo, T., Tang, Q. and Peli, E., 2016. A pilot study of perceptual-motor training for peripheral prisms. Translational vision science & technology, 5(1), pp.9-9.

Publications in Refereed Conference Proceedings

Goodwin, M.S., Haghighi, M., Tang, Q., Akcakaya, M., Erdogmus, D., and Intille, S., 2014. Moving towards a real-time system for automatically recognizing stereotypical motor movements in individuals on the autism spectrum using wireless accelerometry. In Proceedings of the 2014 ACM International Joint Conference on Pervasive and Ubiquitous Computing, pp. 861-872. ACM.

Tang, Q., Vidrine, D.J., Crowder, E., and Intille, S.S., 2014. Automated detection of puffing and smoking with wrist accelerometers. In Proceedings of the 8th International Conference on Pervasive Computing Technologies for Healthcare, pp. 80-87. ICST (Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering).

Paper Presentations at Refereed Conference

Troiano, R., Intille, S., John, D., Chhetry, B.T. and Tang, Q., 2018. NHANES and NNYFS wrist accelerometer data: Processing 7TB of data for public access. In Journal of Physical Activity & Health, 15 (10), pp. S19-S19.

Invited Talks or Symposiums

Invited Speaker
"Screening and summarizing 7TB wrist-worn accelerometer data for NHANES and NNYFS"
Northeastern University PHI Seminar Speaker Series
Boston, MA, October 31, 2018

Invited Workshop Participation	Invited Ph.D. Student, Ph.D. data science immersion program with two-day hackathon on "Predicting customer conversion rate of T.V. advertising", Wayfair LLC, Boston, MA, January 8-12, 2018.
Teaching-Advising	Northeastern University Research experiences for undergraduates (REU-D3): Gilbert Liang (2019), Ryan Cleary (2018)
Teaching-Assisting	Northeastern University CS 4300: Computer Graphics A project-oriented, intermediate course on computer graphics for senior undergraduates. Spring, 2016.
Other Interests	Software development, mobile/web app development, cooking, outdoor activities
Citizenship	China P.R.