

Mohsen Farhadloo

Postdoctoral research associate, UIUC and APPC of UPenn

PERSONAL DATA

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PROFILE

Currently I am working on social media analytics with the applications in public health, public policy and management. I am interested in developing machine learning algorithms to discover useful predictors from online communications such as Twitter's microblogging network to predict sexually transmitted diseases. In general, as a researcher with solid background in machine learning and optimization, I am focused on how organizations and individuals can efficiently utilize the ever-increased online data in their decision-making processes. In the course of my research I am interested in developing new statistical methods for document modeling and use those models to study customer satisfaction.

EDUCATION

Ph.D. in Electrical Engineering and Computer Science: Jan. 2010 to Aug. 2015
Dept. of EECS, University of California, Merced, USA.
M.S. in Electrical Engineering (Communications Systems): Sep. 2006 to Dec. 2009
Dept. of EE, Amirkabir University of Technology (Tehran Polytechnic), Iran.
M.S. project: Speech Enhancement in Non-stationary Noise Conditions.
Award: Exempt from national entrance exam as my honor position for master program.
B.S. in Electrical Engineering (Communications Systems) : Sep. 2002 to Aug. 2006
Dept. of EE, Amirkabir University of Technology (Tehran Polytechnic), Iran.
B.S. project: Classification of Digital Modulations via Wavelet Transform.

RESEARCH EXPERIENCE

Postdoctoral research associate: Aug. 2016 to present.
University of Illinois, Urbana-Champaign and Annenberg Public Policy Center of UPenn.
Lecturer: Aug. 2015 to July 2016
Dept. of EECS, University of California, Merced.
Graduate research assistant: Jan. 2010 to Aug. 2015
Dept. of EECS, University of California, Merced.
Customer satisfaction prediction

- Study of customer satisfaction from online reviews.
- Customer satisfaction modeling using Bayesian approach.
- Aspect-level sentiment analysis and opinion mining.
- Implementing the text preprocessing steps using StanfordCoreNLP and Python NLTK.
- Designing SVM classifiers and clustering methods in Python.
- Proposing an automatic system for identifying the aspects and sentiments of reviews (ICDM 2013).

Investigating the regularization techniques

- Implementing various regularization and cross validation methods in Matlab. (ICASSP 2012)
- Implementing different optimization methods in Matlab.
- Implementing cross validation methods in Matlab.

Data-driven prediction models

- Implementing prediction models using radial basis function in Matlab. (ICASSP 2012)
- Adaptation of prediction models with and without missing data. (Interspeech 2011)

Graduate research assistant: Sep. 2006 to Dec. 2009
 Dept. of EE, Amirkabir University of Technology (Tehran Polytechnic).
 • Speech enhancement techniques for speech contaminated in non-stationary noises.
 • Noise density estimation and Voice activity detection.

SELECTED PUBLICATIONS

- M. Farhadloo**, R.A. Patterson, E. Rolland, “Modeling Customer Satisfaction from Unstructured Data using a Bayesian Approach”, Elsevier journal of Decision Support Systems, June, 2016.
- M. Farhadloo**, E. Rolland, “Fundamentals of Sentiment Analysis and Its Application”, in Pedrycz, Witold, Chen, Shyi-Ming “Sentiment Analysis and Ontology Engineering, An Environment of Computational Intelligence”, Springer, 2016.
- M. Farhadloo**, E. Rolland, “Multi-Class Sentiment Analysis with Clustering and Score Representation”, in IEEE International Conference on Data Mining Workshops (ICDMW) 2013.
- M. Farhadloo**, M.A. Carriera-Perpinan, “Learning/Adaptation a Tongue Shape Model with Missing Data”, in ICASSP 2012.
- M. Farhadloo**, M.A. Carriera-Perpinan, “Regularizing an Adaptation Algorithm for Tongue Shape Model”, in ICASSP 2012.
- C. Qin, M.A. Carriera-Perpinan, **M. Farhadloo**, “Adaptation of a Tongue Shape Model by Local Feature Transformation”, in Interspeech 2010.
- M. Farhadloo**, A. Sayadian, “Speech Enhancement in Non-Stationary Noise Environment”, in Seventeenth Iranian Conference of Electrical Engineering (ICEE 2009), in Persian.
- M. Farhadloo**, A. Sayadian, M. Asgari, A. Mostafavi, “Causal Multi Quantile Noise Spectrum Estimation for Speech Enhancement”, ATNAC 2008.
- M. Asgari, A. Sayadian, **M. Farhadloo**, E. A. Mehrizi, “Voice Activity Detection Using Entropy in Spectrum Domain”, in ATNAC 2008.

TEACHING EXPERIENCE

- TA for Computer Architecture (CSE031):** Summer 2015
 University of California, Merced.
- TA for Computer Architecture (CSE031):** Spring 2015
 University of California, Merced.
- TA for Java programming (CSE020):** Fall 2014
 University of California, Merced.
- TA for Networks security (CSE176):** Fall 2012
 University of California, Merced.
- TA for Data structures in C++ (CSE030):** Spring 2012
 University of California, Merced.
- TA for Data structures in C++ (CSE030):** Fall 2011
 University of California, Merced.
- TA for Data structures in Java/C++ (CSE030):** Spring 2011
 University of California, Merced.
- TA for Java programming (CSE021):** Spring 2010
 University of California, Merced.
- Lecturer for Electronics:** Fall 2007
 Mehr Kam Pars University of Comprehensive Applied Science and Technology, Tehran, Iran

JOURNAL/CONFERENCE REVIEWER

- Program committee of WITS 2014 (24th Workshop on Information Technologies and Systems, 2014).
- IEEE Transactions on Audio, Speech and Language Processing.
- Journal of Computer Vision and Image Understanding, Elsevier.
- IEEE International Conference on Acoustics, Speech and Signal Processing.

QUALIFICATIONS

- Programming languages: Python, Java, C/C++.
- Scientific computation packages: R, Matlab and Simulink, SPSS.
- Text processors and presentation packages: L^AT_EX, Microsoft office.
- Other computer skills: Working experience with MySQL databases, Microsoft access, Microsoft Project.
- Operating systems: Windows, Mac OS, Linux.
- Miscellaneous: Excellent mathematical and independent research skills, academic paper writing/presentation.
- Languages: English, Farsi, Spanish (beginner).

SPECIAL COURSES

Numerical optimization, Advanced topics in machine learning, Machine learning, Stochastic processes, Statistical pattern recognition, Image processing, Automatic speech recognition, Speech processing, Computer networks, Advanced digital communications theory, Information theory and coding, Satellite communications, Digital communications lab, FPGA lab, Antenna, Microwaves, Communications circuits, Industrial electronics, Operations management and IT strategies.

CERTIFICATIONS

- “UT Austin Machine Learning Summer School”:** January 2015
Certified by UT Austin MLSS.
- “General Pedagogy: Surviving the Classroom with 1st Generation College Students:** Spring 2015
Certified by Center for Research on Teaching Excellence, UC Merced.
- “General Pedagogy: Developing Teaching Strategies:** Spring 2014
Certified by Center for Research on Teaching Excellence, UC Merced.
- “General Pedagogy: Improving Teaching:** Spring 2014
Certified by Center for Research on Teaching Excellence, UC Merced.
- “UCSC Machine Learning Summer School”:** Summer 2012
Certified by UCSC MLSS.
- “GSM Signaling”:** Fall 2007
Certified by Mobile Communications Corporation of Iran (MCCI).
- “Primary Bases of GSM” :** Summer 2006
Certified by Mobile Communications Corporation of Iran (MCCI).

AWARDS

- UC Merced Bobcat fellowship, School of engineering:** 2014.
- UC Merced Bobcat fellowship, School of engineering:** 2013.
- UCSC machine learning summer school travel award:** 2012.
- Awarded student:** 2006.
Entering M.S. degree without taking the universities entrance exam, Amirkabir University of Technology.
- Selected student by Albourz institute as an honor student in Tehran:** 2001.

ASSOCIATIONS

- Member of American Association for the Advancement of Science (AAAS).
- Student member of Institute of Electrical and Electronics Engineers (IEEE).