Tianxiao JIANG

PERSONAL DATA

GENDER:	Male
DATE OF BIRTH:	09/22/1990
ADDRESS:	2121 El Paseo St, Apt 1809, Houston, TX, 77054, USA
PHONE:	+1 (832) 788 6779
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URLs:	Blog; LinkedIn; CNELab; Bitbucket; Github

WORK EXPERIENCE

March, 2014 CURRENT

Research Assistant

CLINICAL NEURAL ENGINEERING LAB
Department of Biomedical Engineering, University of Houston

- High-density ECoG brain machine interface and functional mapping research using sparse decoding algorithm, supervised machine learning and statistics. [1–4].
- **CNELab**: Multichannel neural signal (EEG, ECoG, LFP, MEG) visualization and processing software, featuring multithreaded filtering, power spectrum density analysis, time-frequency analysis, spatial/temporal PCA denoising and so on. (Matlab, Object Oriented Design, Java Swing, C++) [5]
- **CNELBehv**: Realtime Teensy sensory data collection and webcam video recording software based on windows multimedia timer and UDP. (WinAPI, WinSocket, AMCap, C++) [5]

2013

Intern
ELE.ME, Rajax Co

- Menu recommendation engine test based on none-distributed Apache Mahout (Java, JDBC, MySQL)

2012-2014

Research Assistant

PATTERN RECOGNITION LAB
Department of Electrical Engineering, Shanghai Jiao Tong University

- Smoke detection for power plant surveillance camera based on Wavelet transform and Gaussian Mixture Model (C++, OpenCV)

EXTRACURRICULAR PROJECTS

Blog	2016 -	Self created website for notes on programming, algorithms, machine learning and math. (C++, Python, Django, AngularJS, PostgreSQL, Bootstrap, Javascript, HTML, CSS)
cnelab.org	2016 -	Self created website for CNELab [5]
VR game	2012	Kinect based motion-control game for Beijing Auto EXPO (C++, OO, OpenCV)

Education

Mar, 2014 - current	PhD candidate Biomedical Engineering, **University of Houston**, USA Current Gpa: 3.6/4.0
Sep, 2008 - Sep, 2012	BSc Electronic Engineering, **Shanghai JiaoTong University**, China Gpa: 3.5/4.0

Award

- **Best paper award**, 1st International Conference on Neuroscience and Cognitive Brain Information Classification (BrainInfo) 2016 [4].

- **Oral presentation**, 7th International IEEE/EMBS Conference on Neural Engineering (NER) 2015 [6].

Computer Skills

Intermediate Knowledge:	Java, Python, jQuery , AngularJS, LaTeX, Django, PostgreSQL
Advanced Knowledge:	C/C++, Object Oriented Design, Matlab, javascript, html5, css, Linux, Socket, Vim, Digital Signal Processing, Machine Learning, Clustering, Statistics (R)

Interests and Activities

Programming, Algorithms, Operating System, Open-source
Tennis (NTRP 4.5), Guitar

Publications

[1] **Tianxiao Jiang**, Nuri Firat Ince, Tao Jiang, Taylor Wang, Shenshen Mei, Yunlin Li, Xiaofei Wang, and Zhiyi Sha, "Local spatial correlation analysis of hand flexion/extension using intraoperative high-density ECoG," in *Proceedings of the Annual International Conference of the IEEE Engineering in Medicine and Biology Society, EMBS*, (Milan), pp. 6190–6193, Institute of Electrical and Electronics Engineers Inc., 2015.

[2] **Tianxiao Jiang**, Tao Jiang, Taylor Wang, Shanshan Mei, Qingzhu Liu, Yunlin Li, Xiaofei Wang, Sujit Prabhu, Zhiyi Sha, and Nuri F. Ince, "Characterization and Decoding the Spatial Patterns of Hand Extension/Flexion using High-density ECoG," *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, vol. 4320, no. c, pp. 1–1, 2017.

[3] **Tianxiao Jiang**, Tao Jiang, Taylor Wang, Shanshan Mei, Qingzhu Liu, Yunlin Li, Xiaofei Wang, Sujit Prabhu, Zhiyi Sha, and Nuri F. Ince, "Investigation of the Influence of ECoG Grid Spatial Density on Decoding Hand Flexion and Extension," in *IEEE INTERNATIONAL CONFERENCE ON SYSTEMS,MAN,AND CYBERNETICS*, (Banff), 2017.

[4] **Tianxiao Jiang**, Tao Jiang, Taylor Wang, Shenshen Mei, Qingzhu Liu, Yunlin Li, Xiaofei Wang, Sujit Prabhu, Zhiyi Sha, and Nuri F Ince, "Classification of Hand Flexion / Extension Using High-density ECoG," in *BRAININFO 2016 : The First International Conference on Neuroscience and Cognitive Brain Information Classification*, no. c, (Barcelona), pp. 1–4, 2016.

[5] **Tianxiao Jiang**, Hasan Siddiqui, Shruti Ray, Priscella Asman, Musa Ozturk, and Nuri Ince, Firat, "A Portable Platform to Collect and Review Behavioral Data Simultaneously with Neurophysiological Signals," in *Proceedings of 39th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, EMBS*, (Jeju Island), 2017.

[6] **Tianxiao Jiang**, Nuri F. Ince, Tao Jiang, Taylor Wang, Shenshen Mei, Yunlin Li, Xiaofei Wang, Sujit Prabhu, and Zhiyi Sha, "Investigation of the spatial and spectral patterns of hand extension/flexion using high-density ECoG," in *7th International IEEE/EMBS Conference on Neural Engineering (NER)*, pp. 589–592, IEEE, apr 2015.

[7] Chunyan Cao, Dianyou Li, **Tianxiao Jiang**, Nuri Firat Ince, Shikun Zhan, Jing Zhang, Zhiyi Sha, and Bomin Sun, "Resting state cortical oscillations of PD patients without and with Subthalamic deep brain stimulation, a MEG study.," *Journal of clinical neurophysiology : official publication of the American Electroencephalographic Society*, sep 2014.