Curriculum Vitae: Qiang Zhang

Contact Information	Chinese Academy of Sciences North Forth Ring Road West Beijing, China, 100190	Mobile:+86-13261556062 Email: qiangZhang_phd@hotmail.com

Research Interests

Machine Learning, Web Data Mining, Natural Language Processing

Education

University of Chinese Academy of Sciences (UCAS), Beijing, China   **Sept. 2014 - Expected Jun. 2017**

M.Sc., Bioelectronics

- Advisor: Prof. Shanhong Xia
- Research Focus: Machine learning, physiological signal processing, multimodal data fusion
- Major coursework: Matrix, Stochastics, Functional Analysis, Machine Learning, Optimization, Data Structure and Algorithm, Signal Processing, Time Series Analysis, Project Management
- GPA:3.5/4.0

Shandong University (SDU), Jinan, China   **Sept. 2010 – Jun. 2014**

B.Eng., Internet of things

- GPA: 3.6/4.0, Rank: 1/49

Professional Experience

Heart rate and blood pressure monitoring using multimodal data fusion and machine learning

National Key Lab of Transducer Technology, Beijing   **Sept. 2014 - present**

Graduate Research Assistant

- Goal: Improve heart rate and blood pressure prediction accuracy, and arrhythmia alarm classification
- Responsibilities:
  - Implemented data acquisition, cleaning and feature engineering code in Python
  - Modeled and tested SVM, Kalman filter and multi-layer perception using scikit-learn and Pybrain
  - Developed GUI software for real-time data analysis based on PyQt4

An Intelligent Parking Guidance System

State Key Lab of Modern Communication Technology, Jinan   **Mar. 2012 - May 2014**

Undergraduate Researcher and Project Leader

- Goal: Display available parking spaces in an App and plan a route to the user-selected parking area
- Responsibilities:
  - Designed an online raspberry to send parking information to servers by HTTP protocol
  - Implemented a Location Based Services platform using Java
  - Prepared draft manuscripts and corresponded to inquires
  - Organized weekly meetings and assigned tasks as the team leader

Internship

Remote cardiovascular disease diagnosis based on electrocardiogram

Pattern Recognition Lab, Department of Electrical Engineering, Tsinghua University, Beijing

Algorithm Engineer   **May 2016– present**

My Responsibilities mainly include developing stacked autoencoder network (DNN architecture) using Theano in cooperation with the research group of Xinheyidian Technology Company.

Selected Publications	[1] **Qiang Zhang**, Yongjiao Xue, Xianxiang Chen, Zhen Fang, and Shanhong Xia, "Cuff-less Blood Pressure Measurement Using Pulse Arrival Time and Kalman Filter", *Journal of Micromechanics and Microengineering*. (Under review)

[2] **Qiang Zhang**, Xianxiang Chen, Zhen Fang, and Shanhong Xia, "Reducing false arrhythmia alarm rates using robust heart rate estimation and cost-sensitive support vector machines", *Physiological Measurement*. (Research paper, under review)

[3] **Qiang Zhang**, Xianxiang Chen, Zhen Fang, and Shanhong Xia, "Continuous Blood Pressure Monitoring Algorithm Using Pulse Transit Time and Modified Kalman Filter", *Asia-Pacific Conference on Transducers and Micro-Nano Technology (APCOT)*, Japan, June 2016. (Conference paper)

[4] **Qiang Zhang**, Xianxiang Chen, Zhen Fang, and Shanhong Xia, "False Arrhythmia Alarm Reduction in the Intensive Care Unit Using Data Fusion and Machine Learning", *International Conference on Biomedical and Health Informatics(EMBS)*, Las Vegas, February 2016. (Conference paper)

[5] **Qiang Zhang**, Dong Bian, Zhongzhou Lu, and Wuxiang Zhou, "An intelligent parking guidance system", CN201410077409.3, 2014. (Patent)

Awards and Honors

2015	First-class Academic Scholarship at UCAS	(Top 3%)
2015	Excellent Student at Chinese Academy of Sciences	(Top 5%)
2014	Top Ten Outstanding Class President at SDU	(10/20,000)
2013	Third Prize in Chinese Undergraduate Contest of Innovation	(Top 10%)
2012	National Scholarship	(Top 2%)

Technical Skills

English Proficiency
  IELTS: 7.0
Programming
  C, Matlab, Python, R, Java, SQL
Software
  LaTeX, Linux, Git, Eclipse, EndNote, MS Office Suite
Miscellaneous
  Origin, Photoshop, StackOverflow, MindManager

Personal

Excellent health
Strong interdisciplinary and integrative background
Thrives in collaboration environment
Strong presentation and public speaking skills
Interests include reading, music, hiking, skiing, body-building, cooking