Feng QIAN

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Room 608, 38 Building, Peking University, Beijing, 100871, China

EDUCATION

Peking University (PKU), Beijing, China Sep 2014 – Jul 2018

Bachelor of Management in Information Management and Information System

Bachelor of Science in Electronic Engineering and Computer Science (Dual Major)

	First Year	Second Year	Third Year
GPA	3.44	3.70	3.76
Ranking	14th in 80	**4th in 80**	**3th in 80**

Courses: JAVA Object-oriented Programming with Java (94) / Data Structure and Algorithm (90.5) / Computer Networks (93) / Fundamental of operational research (90) / Multi-media Technology (90) / Database Systems (88) / Natural Language Processing (88) /

CS Department, University of Southern California (USC) May 2017 – Present

Full-time researcher at the Melady Group on fake news detection

Department of EECS, University of Illinois, Urbana-Champaign (UIUC) Jun 2016 – Sep 2016

Full-time researcher at the ES-CAD Lab on video face recognition

Microsoft Research Asia (MSRA) November 2017 – Jun 2018

Full-time researcher in Big Data Mining Group (BDM) on dialogue understanding tools for Microsoft Office®

PUBLICATIONS

[[Publication 1.]] **Feng Qian**, Lei Sha, Luchen Liu, Baobao Chang, Ming Zhang. Syntax Aware LSTM Model for Semantic Role Labeling. Proceedings of *the Conference on Empirical Methods in Natural Language Processing (EMNLP) Workshop – Structured Prediction for NLP (SP-NLP)*. 2017.

[[Publication 2.]] **Feng Qian**, Chengyue Gong, Luchen Liu, Lei Sha, Ming Zhang. Topic Medical Concept Embedding: Multi-Sense Representation Learning for Medical Concept. *IEEE International Conference on Bioinformatics and Biomedicine (BIBM)*. 2017. Long paper. (Acceptance Rate 10.4%)

[[Publication 3.]] **Feng Qian,** Lei Sha, Baobao Chang, Zhifang Sui. Jointly Extracting Event Triggers and Arguments by Dependency-Bridge RNN and Tensor-Based Argument Interaction. *Association for The Advancement of Artificial Intelligence (AAAI)*. 2018.

[[Publication 4.]] **Feng Qian**, Chengyue Gong, Natali Ruchansky, Lei Sha, Ming Zhang, Yan Liu. Neural User Response Generator: Early Fake News Detection with Wisdom of the Crowd. Submitted to *World Wide Web Conference (WWW)*. 2018.

[[Publication 5.]] **Feng Qian**, Natali Ruchansky, Yan Liu. Fake News Detection Technology: A Survey. With more than 15 pages and 70 references included. Finished and to be submitted to relevant journal.

[[Publication 6.]] **Feng Qian,** Natali Ruchansky, Prajwal Anad, Yan Liu. Dataset: Fake News Detection Dataset with Both Article Body and User Responses. Finished and submitted to *World Wide Web Conference (WWW). 2018.*

[[Publication 7.]] Lei Sha, **Feng Qian**, Zhifang Sui, Baobao Chang. Will Repeated Reading Benefit Natural Language Understanding? China *Computer Federation (CCF) Conference on Natural Language Processing & Chinese Computing (NLPCC)*. 2017.

[[Publication 8.]] Lei Sha, Xiaodong Zhang, **Feng Qian**, Baobao Chang, Zhifang Sui. A Multi-View Fusion Neural Network for Answer Selection. *Association for The Advancement of Artificial Intelligence (AAAI)*. 2018.

[[Publication 9.]] Liye Xiao, **Feng Qian**, Wei Shao. Multi-step Wind Speed Forecasting Based on a Hybrid Forecasting

Architecture and An Improved Bat Algorithm. *Energy Conversion and Management (ECM, SCI-indexing)*. 2017.

[[Publication 10.]] Chengyue Gong, **Feng Qian**, Lei sha. Natural Language Generation from Multi-Relational Data. Finished and to be submitted to *International Joint Conferences on Artificial Intelligence (IJCAI). 2018.*

RESEARCH EXPERIENCES

Melady Lab, University of Southern California (USC), CA, USA May 2017 – Present

Fake news detection using machine learning and deep learning

Advisor: Prof. Yan Liu, Post Doc Natali Ruchansky

- Surveyed related work in the area of fake news detection and finished a first author survey paper with more 15 pages and more than 70 papers cited after reading more than 100 fake news detection papers. *[[Publication 5.]]*
- Analyzed comprehensive available news detection datasets and collected a brand new fake news detection dataset, which contains both news article and user response. *[[Publication 6.]]*
- Proposed and implemented a Two Layer Convolutional Neural Network with User Response Generator (TCNN-URG) combining generative model (VAE) and deep learning model (CNN) to utilize extra knowledge lies between user responses and news article.
- Utilized article-response information by reconstructing user responses, and demonstrated a significantly enhanced accuracy for fake news detection. *[[Publication 4.]]*

Institute of Network Computing and Information System, EECS, Peking University, China Jan 2016 – Present

Medical concept representation learning using machine learning and non-parametric method *[[Publication 2.]]*

Advisor: Prof. Ming Zhang, Ph.D. Luchen Liu

- Surveyed related works on medical concept embedding, found the problem that current embedding techniques could not consider multi-sense attributes of medical concepts and lack interpretability.
- Proposed and implemented Topic Medical Concept Embedding (TMCE) that combines intuitions from both embedding model and non-parametric topic model.
- Utilized TMCE to train and assign multi-sense embedding, enabling better interpretation automatically.
- Demonstrated outperformance over other strong baselines on the diagnose prediction task.
- Orally presented the work in BIBM. 2017, Kansas City, Missouri.

Key Laboratory of Computational Linguistics, EECS, Peking University, China Aug 2016 – April 2017

Semantic role labeling (SRL) using deep learning and neural networks *[[Publication 1.]] [[Publication 3.]]*

Advisor: Prof. Baobao Chang, Ph.D. Lei Sha

- Performed comprehensive research on semantic role labeling (SRL) and found that Bi-LSTM model for semantic role labeling could not make use of higher-level syntactic information from dependency relationships.
- Proposed to modify the structure of Bi-LSTM according to the structure of dependency relationships and empowered the Bi-LSTM with additional syntax information.
- Implemented and tested the proposed system and demonstrated outperformance over state-of-the-arts on both Chinese Tree Bank 1.0 (CPB 1.0) and English CoNLL 2005.
- Further adapted the developed technique to Event Extraction task.

ES-CAD Lab, ECE, University of Illinois at Urbana-Champaign (UIUC), IL, USA Jun 2016 – Sep 2016

Real time facial recognition system form video

Advisor: Prof. Deming Chen, Co-Advisor: Prof. Zuofu Cheng

- Proposed a new eigen-face frame selection algorithm.
- Designed a hardware integrated real time facial recognition pipeline aiming to move computation forward to front-end hardware, which significantly improved the computation efficiency of servers.

Other Collaborative Research Projects

- Contributed to half of all model coding and part of paper writing. *[[Publication 7.]]*
- Contributed to part of coding and part of paper writing. *[[Publication 8.]]*
- Contributed to all coding, all results plotting, and part of paper writing. *[[Publication 9.]]*
- Contributed to brainstorming, idea proposal, part of coding and paper writing. *[[Publication 10.]]*

HONORS

Innovative Researcher Award of Peking University, 2017

- One of the 37 undergraduate students selected from 50,000+ students including all master and PhD students in Peking University

Academic Performance Award

- 1st Three Year Overall Academic Performance in My Department

Shouren Chen Research Scholarship, 2017

- Highest Student Research Scholarship of Peking University (0.2%)

Student Excellent Research Award, 2017 (5%)

- Student Excellent Research Award, 2016 (5%)

ENTREPRENRUESHIP

Technology consultant and developer in Guidepost Ltd. Aug 2015 – present

Machine learning model to enhance sales

- Guidepost Ltd. is a company providing educational products such as summer camps and other training programs.
- Collected and cleaned sales data in the last ten years.
- Trained a xgboost decision tree model on the dataset, found out students that are on the edge of signing and asked salespeople to give them special discount and other incentive policies.
- Enhanced sales by 28% in the year of 2016 and 18% in 2017.

SKILLS

Programming: C, C++, Lisp Python (Theano), Java, Html, JavaScript, Jquery, CSS, Linux, Vim

Language: English (fluent), Mandarin Chinese (native)

- GRE: Verbal 158 +Quantitative 167 +Analytical Writing 3.5.
- TOEFL: Total 112 (Reading 30+Listening 27+Speaking 27+Writing 28).
- Excellent in oral English communication. Have been to more than 20 states in the USA.

Teaching: Advanced Algorithm and programming | Teaching Assistant Sep 2016 – Jan 2017

Music: Lead Guitarist in a famous school band GentleMonster Oct 2014 – Jul 2016