Jiaming Song

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tsong.me

Education

2016 – **Stanford University,** Palo Alto, CA.
Ph.D. Program in Computer Science

2012 – 2016 **Tsinghua University (THU),** Beijing, China.
B.Eng. in Computer Science and Technology. Graduated with Outstanding Honor (Top 1%).
GPA: 93/100. **Rank**: 1/116.

July 2014 **National Tsing Hua University (NTHU),** Hsinchu, Taiwan.
Exchange student, Electrical Engineering and Computer Science

Publications and/or Submitted Manuscripts

June 2016 **Factored Temporal Sigmoid Belief Networks for Sequence Learning**
Jiaming Song, Zhe Gan and Lawrence Carin. In *the 33rd International Conference on Machine Learning (ICML)*.

In submission **Max Margin Nonparametric Latent Feature Models for Link Prediction**
Jun Zhu, Jiaming Song and Bei Chen.

Feburary 2016 **Discriminative Nonparametric Latent Feature Relational Models with Data Augmentation**
Bei Chen, Ning Chen, Jun Zhu, Jiaming Song and Bo Zhang.
In *the 30th Association for the Advancement of Artificial Intelligence (AAAI) Conference*.

September 2015 **Organizational Churn: A Roll of the Dice?**
Canyao Liu*, Jiaming Song* and Chuan Yu*.
In *Undergraduate Mathematics and Its Applications*, Journal Issue 36.2. Corresponding author.

Research Experiences

Sept 2016 - **Future Data Systems Group,** Stanford University. Advisor: Prof. Peter Bailis
Investigating efficient (low latency) unsupervised learning of time-series for outlier detection with deep learning.

April 2016 - July 2016 **Detection, Tracking and Reidentification Group,** Megvii Inc. Mentor: Chi Zhang
Developed a scalable framework to provide distant supervision for unlabeled data with trained models, which allows model distillation and merging network structures for different tasks, such as detection and parsing. The details are very similar to Google's work on semi-supervised knowledge transfer which is published on September 2016. Megvii Inc. is a leading unicorn start-up in China, with emphasis on machine learning and computer vision.

July 2015 - September 2015 **Information Initiative @ Duke (iiD),** Duke University. Advisor: Prof. Lawrence Carin.
Worked on conditional factored deep generative models using recent Neural Variational Inference methods, which allows for semi-supervised deep learning and sequence generation with side information.
Our work is accepted by *the 33rd International Conference on Machine Learning*.

November 2014 - June 2015 **Statistical AI & Learning (TSAIL) Group,** Tsinghua University. Advisor: Prof. Jun Zhu.
Explored stochastic variational methods for link prediction problems. Proposed an efficient method that would train on a network with over 3 million nodes, a significant improvement over original methods.
Our work is under review by *the IEEE Transactions on Pattern Analysis and Machine Intelligence*.

July 2014 - October 2014 **Visual Computing Group,** Microsoft Research Asia. Advisor: Jingdong Wang.
Implemented a convolutional neural network for multiple label image annotation with Caffe.

October 2013 - June 2014 **TSAIL,** Tsinghua University. Advisor: Prof. Jun Zhu.
Implemented a Gibbs sampling algorithm for Scalable Inference for Logistic Normal Topic Models (NIPS 2013).

Honors and Awards

June 2016 **Qualcomm Scholarship,** issued by Qualcomm.
Offered to Tsinghua undergraduates with exceptional research experiences (top 1%).

June 2015 **Google Excellence Scholarship,** issued by Google.
This scholarship is offered to Chinese undergraduate and graduate students who possess remarkable academic achievements and project experiences. 58 students are selected nationwide (6 in Tsinghua University).

April 2015 **Outstanding Winner,** Interdisciplinary Contest in Modeling 2015.
Highest award (9 out of 2317) of the contest. Published a paper which models organizational churn using Bayesian-inspired methods and network science. See github.com/jiamings/icm2015 for more details.

April 2015 **Third Prize,** 33rd Tsinghua Challenge Cup, issued by Tsinghua University.
Our project implements fast, scalable video segmentation and classification which utilizes deep activation features. Please see jiamings.github.io/projects/decaf-video for details.

October 2014 **Outstanding Undergraduate,** issued by the China Computer Federation (CCF).
Only 4 students in Tsinghua, and 100 in China are awarded each year.

May 2014 **Spark Program for Technological Innovation,** Tsinghua University.
Among top 50/3000 students for achievements in scientific and technological innovations.

December 2013 **Zhong Shimo Scholarship,** issued by Dept. of Computer Science and Technology.
Highest scholarship in the CS Department for academic achievements, social activities, and charity work. (top 0.75%)

July 2011 **Bronze Prize, National Olympiad in Informatics,** issued by China Computer Federation (CCF).

Programming Experience

Proficient in C++, Python and Matlab. Capable of Java, LaTeX, Julia, C#, R, CUDA, Javascript, HTML/CSS, VHDL and Verilog. Some of my projects can be found on jiamings.github.io/projects.

October 2016 **fast-weights,** Implemented the model in *Using Fast Weights to Attend to the Recent Past*.
The first implementation that is publicly available, receiving attention on GitHub.

November 2015 **EPOC - Emotion Personalized | Online Chat**, for HackShanghai, China's largest hackathon.
Modifying wallpapers and background music by mind, with the help of Emotiv EPOC.
Our project was reported by International Channel Shanghai.

June 2015 **TUSK - Tsinghua University Search Kit**, Course Project
A search engine over Tsinghua news and documents with auto-completion and voice search.

May 2015 **GeoRun - A Unity Game with Kinect Controls**, Course Project
We developed GeoRun, which is a simplified Temple Run game developed with Unity and Kinect SDK v1.8.

December 2014 **Video Classification with Visual and Audio Features**, Course Project.
This project aims to do fast and scalable video sequence classification through deep feature extraction methods. We use **Caffe** for deep visual feature extraction.

Language Proficiency

TOEFL Total: 113 (Reading: 30; Writing: 29; Speaking: 24; Listening: 30).

GRE Verbal: 160/170 (85%); Quantitative: 170/170 (98%); Analytical Writing: 5.0/6.0 (93%).

Extracurricular Courses

Coursera Machine Learning | Introduction to Marketing | Introduction to Financial Accounting | Social and Economical Networks: Models and Analysis | Introduction to Classical Music | Microeconomics: The Power of Markets | Microeconomics: When Markets Fail