Jiaming Song

+86 18001585905
+1 (323)327-1932
jiaming.tsong@gmail.com
www.github.com/jiamings

Education

2012 – 2016 **Tsinghua University**, *Beijing, China*.
B.Eng. (Expected) in Computer Science and Technology
GPA: 92.83/100. **Rank**: 3/136.

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

Research Experience

July 2015 - Current **Information Initiative @ Duke (iiD)**, *Duke University*, Advisor: Prof. Lawrence Carin.
Currently I am working on conditional factored deep generative models using recent Neural Variational Inference methods, which allows for semi-supervised deep learning and label-based sequence generation.

November 2014 – June 2015 **State Key Lab of Intelligent Tech. and Systems (TNList)**, *Tsinghua University*, Advisor: Prof. Jun Zhu.
Further explored more acceleration method for link prediction problems. Proposed an efficient method that would train on a network with over 3 million nodes, which is over ten thousand times increase over original methods. Our work is submitted to IEEE Trans. PAMI.

July 2014 – October 2014 **Visual Computing Group**, *Microsoft Research Asia*, Advisor: Jingdong Wang.
Worked on classification and detection algorithms using deep learning methods; studied and modified Caffe, and open-source deep learning framework in C++ and CUDA; implemented a convolutional neural network for multiple label image annotation which achieved state-of-the-art precision results.

October 2013 – June 2014 **State Key Lab of Intelligent Tech. and Systems (TNList)**, *Tsinghua University*, Advisor: Prof. Jun Zhu.
Explored and implemented stochastic variational inference methods for max-margin latent feature relational model, which is used for link prediction. Implemented a Gibbs sampling benchmark algorithm for Scalable Inference for Logistic Normal Topic Models (accepted by NIPS 2013).

Honors and Awards

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) this year.

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

October 2014 **Outstanding Undergraduate**, issued by the China Computer Federation (CCF).
Only 2 students in Tsinghua, and 100 in China are awarded. Attended China National Computer Congress, where we received the award and had the pleasure to meet Alexander Wolf(President of the ACM) and Ivan Sutherland(Turing Award 1988).

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(15000 CNY) in the CS Department for academic achievements, social activities, and charity work.

Publications and/or Submitted Manuscripts

IEEE TPAMI (submitted) **Max Margin Nonparametric Latent Feature Models for Link Prediction**, Jun Zhu, **Jiaming Song**, Bei Chen.
Manuscript available on request. My contributions include using stochastic methods to greatly improve the inference speed of the original algorithm. With my enhancement, the algorithm can now do inference on networks with millions of nodes, whereas it could only do a few hundred nodes previously.

UMAP (not peer reviewed) **Organizational Churn: A Roll of the Dice?**, **Jiaming Song**, Canyao Liu, Chuan Yu.
To appear in *Undergraduate Mathematics and Its Applications*, Journal Issue 36.2. Corresponding author.

Extracurricular Courses

May 2015 **Introduction to Marketing** by University of Pennsylvania on Coursera.

June 2015 **Introduction to Financial Accounting** by University of Pennsylvania on Coursera.

Activities and Societies

March 2013 – Current **Association for Student International Communication**, Tsinghua University.
One of the top student associations in Tsinghua devoted to projects that serve to expand the international vision of Tsinghua students. ASIC has won the Top 10 associations in Tsinghua for 5 years straight, while being the first in 3 years.

September 2013 – Current **Badminton Team**, Dept. of Computer Science and Technology, Tsinghua U..
Participate in training once a week.

August 2013 **Building Bridges Charity Project**, *Coordinator*, Tsinghua University.
Spend one week teaching high school students in Lishui, Zhejiang with students from Tsinghua U., Peking U. Yale U, etc. Coordinated the team of Tsinghua students.

August 2014 **Initiating Mutual Understanding through Student Exchange**, *Vice President*, Tsinghua U, Peking U, and Harvard U..
Organized the event planning and design process for IMUSE, a 8-day forum where students from China and the US. share their life stories and thoughts, and experience life together.

English Proficiency

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

GRE Verbal: 159/170; Quantitative: 170; Analytical Writing: 3.5.

Programming Experience

Proficient

C / C++ / CUDA / LaTeX Implemented acceleration methods for link prediction(2000+ lines of code); implemented core algorithm for the Outstanding paper in ICM 2015(800+ lines); implemented extensions to Caffe to create a convolutional neural network for multilabel image annotation.

Python Developed Biopedia, a web service for the Bioinformatics group in Tsinghua, using the Flask framework and insights of Google Material Design. The service is currently deployed at `biopedia.bigdata-thu.org`.

Java Developed a simple instant messaging application with Google Protocol Buffer during exchange in NTHU.

Matlab Developing deep generative models at Duke (unpublished work). Related GitHub repo available on request.

Familiar (used in at least 1 course project)

Bash, HTML, VHDL, Verilog, R, C#.