BIYE JIANG

bjiang@cs.berkeley.edu
(+1) 510-326-3261 (+86) 15210588631

EXPERIENCE

Alibaba Inc. *May 2018 - Present*
Algorithm expert in Advertising Algorithm team. Working on large scale deep learning systems

University Of California, Berkeley *August 2013 - May 2018*
PhD in Computer Science
Advisor: Prof. John Canny

Tsinghua University August 2009 - July 2013
B.Eng in Computer Science & Technology

RESEARCH INTEREST

I am interested in building toolkits for modern machine learning/deep learning experts or data scientists who will usually work on prototyping new models or running experiments on large scale dataset. Our methodology includes but not limit to using hardware accelerations like GPU, providing implementation framework for machine learning algorithms, building visual interface for real-time control and monitoring.

Boosting low-level machine performance and improving human productivity are both important for modern data analytic tasks. My research is also trying to bridge the gap between users and the complex machine learning systems, especially those deep neuron networks.

PUBLICATIONS

Biye Jiang, David M Chan, Tianhao Zhang, and John F Canny. Diagnostic visualization for deep neural networks using stochastic gradient langevin dynamics. *arXiv preprint arXiv:1812.04604*, 2018

Biye Jiang. *Exploratory model analysis for machine learning.* PhD thesis, EECS Department, University of California, Berkeley, May 2018

Biye Jiang and John Canny. Interactive machine learning via a gpu-accelerated toolkit. *The 22nd ACM International Conference on Intelligent User Interfaces (IUI)*, 2017

Pablo Paredes, Vasilis Oikonomou, Rocio Francesca Guerrero, Terrie Yang, Pierre Karashchu, Biye Jiang, James Landay, Coye Chesire, and John Canny. Inquire tool: Early insight discovery for qualitative research. In *Companion of the 2017 ACM Conference on Computer Supported Cooperative Work and Social Computing*, pages 29–32. ACM, 2017

Biye Jiang and John Canny. Interactive machine learning using bidmach. *Workshop on Machine Learning Systems at Neural Information Processing Systems (NIPS)*, 2015

Biye Jiang and John Canny. Interactive clustering with a high-performance ml toolkit. *KDD 2015 Workshop on Interactive Data Exploration and Analytics*, 2015

Huasha Zhao, Biye Jiang, John F. Canny, and Bobby Jaros. Same but different: Fast and high quality gibbs parameter estimation. In *Proceedings of the 21th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining*, KDD '15, pages 1495–1502, 2015

Zhicheng Liu, Biye Jiang, and Jeffrey Heer. immens: Real-time visual querying of big data. *Computer Graphics Forum (Proc. EuroVis)*, 2013

S Hu, Kun Xu, L Ma, Bin Liu, B Jiang, and J Wang. Inverse image editing: recovering a semantic editing history from a before-and-after image pair. *ACM Transactions on Graphics*, 32(6):194, 2013

L Ma, Kun Xu, T Wong, B Jiang, and S Hu. Change blindness images. *IEEE TVCG*, 2013

ACADEMIC SERVICE

Organized Workshop on Deep Learning Practice for High-Dimensional Sparse Data with KDD 2019
`http://dlp-kdd.github.io`

Organized Workshop on Visualization for Deep Learning at ICML 2016, 2017
`https://icmlviz.github.io`

INTERN EXPERIENCE

Applied scientist Intern at Amazon Music, San Francisco Summer 2017
Work with: Kat Ellis, Leo Dirac

Music, Echo, People, and Deep learning

Intern at WeChat, Guangzhou, China Winter 2016

Wechat Index related

Research Intern at Microsoft Research, Redmond Summer 2015
Work with: Saleema Amershi, Ran Gilad-Bachrach, Mikhail Bilenko Machine Teaching Group, MSR

· Building toolkits to help data scientists debugging machine learning algorithms. Extended work from ModelTracker.

Research Intern at Adobe Summer 2014
Work with: Zhicheng Liu, Mira Dontcheva, Wilmot Li, Jovan Popovic *Adobe Research*

· Building toolkits to help people easily create Infographics without writing code.

Student Cluster Challenge Spring 2013
Advisor: Prof. Xiaomeng Huang *HPC group, Tsinghua*

· Exploring the best configuration for Linpack benchmark and HPC applications like Gromacs, WRF
· Performance tuning on cluster equipped with NVIDIA K20, Intel MIC.

Stanford Undergraduate Visiting Research Program Summer 2012
Advisor: Prof. Jeffrey Heer *Visualization Group, Stanford*

· Project: Interactive Visual Analysis of Large Scale Geographic Data using WebGL
· Our novel approach applies WebGL-based parallel computation to enable rapid interaction in browsers.
· Much faster for data aggregation and rendering comparing to conventional SVG approach.

Research Intern on Image processing Jun 2011 - Jan 2013
Advisor: Prof. Kun Xu and Prof. Shimin Hu *Graphics Computing Group, Tsinghua*

· Project focusing on recovering image editing operator given the edited image and the source.
· Project focusing on the interesting human vision phenomenon: change blindness. Developing saliency model to measure such difficulty.

TECHNICAL STRENGTHS

Programming Languages	C/C++, JavaScript, Scala, Java, R, Python, SML, Lisp, MATLAB
Tools, Libraries	D3, BIDMach, MXNet, Tensorflow, WebGL, CUDA, Spark, MPI

TEACHING EXPERIENCE

Graduate Student Instructor Fall 2014

–CS194/294 Introduction to Data Science

Graduate Student Instructor Fall 2017/ Spring 2018

– DS100 Principles and Techniques of Data Science

– `http://ds100.org`

COMPETITION AWARD

ACM International Collegiate Programming Contest 2009 - 2015

–6th Place (Silver Price) in the World Finals 2015

–Champion in Pacific NorthWestern Region Contest (Advancing to the World Finals) 2013,2014

–Champion in Asia Hangzhou Regional Contest 2012

Student Cluster Challenge at International Supercomputing Conference 2^{nd} Place 2013

Asia Student Supercomputer challenge Champion 2013

Baidu A-Star Programming Competition 3^{rd} Place out of over 30,000 contestants 2011

Youdao Programming Competition 5^{th} Place out of over 21,000 contestants 2010

National Olympic in Informatics Competition 6^{th} Place out of 295 contestants 2008