

BIYE JIANG

bjiang@cs.berkeley.edu

(+1) 510-326-3261

EDUCATION

University Of California, Berkeley

PhD Student in Computer Science

Advisor: Prof. John Canny & Prof. Maneesh Agrawala

August 2013 - Present

Tsinghua University

B.Eng in Computer Science & Technology

August 2009 - July 2013

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 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, New York, NY, USA, 2015. ACM

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 Visualization for Deep Learning at ICML 2016, 2017

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 Tools, Libraries

C/C++, JavaScript, Scala, Java, R, Python, SML, Lisp, MATLAB
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

–DS100 Principles and Techniques of Data Science

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 |