Binhang Yuan

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Profile

- I am a Ph.D. candidate working on large scale machine learning and programming language. My adviser is Dr. Chris Jermaine, and I am co-advised by Dr. Anastasios Kyrillidis for my Ph.D. thesis.

Experience

Research Assistant, **Rice University**, Houston, TX, United States — 2016/08 ~ Present

- Working with Dr. Chris Jermaine and Dr. Anastasios Kyrillidis for my Ph.D. thesis.
- Designed a sparsified model parallelism algorithm for distributed feed forward neural network training.
- Designed and implemented a distributed machine learning system based on a relational database system (PlinyCompute).

*Research Intern, **Microsoft Research Asia**, Beijing, China* — 2017/07 ~ 2017/11

- Worked with Dr. Weiwei Cui on designing a visualization system for deep learning tasks.

Software Development Engineer Intern, **Tableau Software**, Seattle, WA, United States — 2016/05 ~ 2016/08

- Worked in Moving to the Web team.
- Implemented quick number formatting feature for Release 10.1.

Software Development Engineer Intern, **Isilon EMC²**, Santa Clara, CA, United States — 2015/05 ~ 2015/08

- Worked in Isilon System for cloud storage.
- Added new features to Likewise I/O filter audit system to track transactions in OneFS network file system.

Research Assistant, **Rice University**, Houston, TX, United States — 2013/09 ~ 2015/05

- Worked with Dr. Ron Goldman and Dr. David Y. Khechoyan (Baylor College of Medicine) on computer graphics, geometry modeling, and applied such techniques to objective plastic surgery assessment.
- Designed an objective system to evaluate the effect of plastic surgery based on the 3D photos pre- and post- surgery.

Education

Rice University, Houston, TX, United States — 2016/08 - Present
Ph.D., Computer Science

Rice University, Houston, TX, United States — 2013/08 - 2016/05
M.S., Computer Science

Fudan University, Shanghai, China — 2009/09 - 2013/07
B.S., Computer Science, GPA: 3.73/4.00 (Rank 1st in class)

Publications

1. **B. Yuan** and W. Xing, "Diagnosing Cardiac Abnormalities from 12-Lead Electrocardiograms Using Enhanced Deep Convolutional Neural Networks" accepted by MLMECH-MICCAI 2019
2. D. Jankov, S. Luo, **B. Yuan**, Z. Cai, J. Zou, C. Jermaine, and Z. Gao, "Declarative recursive computation on an RDBMS: or, why you should use a database for distributed machine learning." *Proceedings of the VLDB Endowment*, *12*(7), 822-835. (VLDB19 **Honourable Mention Award**)
3. J. Zou, R.M. Barnett, T. Lorido-Botran, S. Luo, C. Monroy, S. Sikdar, K. Teymourian, **B. Yuan**, and C. Jermaine, 2018, May. PlinyCompute: A platform for high-performance, distributed, data-intensive tool development. In *Proceedings of the 2018 International Conference on Management of Data*(pp. 1189-1204). ACM. (SIGMOD18)
4. **B. Yuan**, V. Murali, and C. Jermaine, "Abridging Source Code", in P*roceedings of the ACM on Programming Languages* 1.OOPSLA (2017): 58. (OOPSLA17)
5. **B. Yuan**, R. Goldman, E. Wang, O. Olorunnipa, D. Khechoyan, "Generating a 3D Normative Infant Cranial Model", *Procedia Computer Science.* 2016 Dec 31;80:988-98. (ICCS16)
6. **B. Yuan**, D. Khechoyan, R. Goldman, "A New Objective Automatic Computational Framework for Visualizing the Results of Infant Cranial Surgery", *International Conference on Biomedical Computing 2015*.
7. K. Li, B. Yan and **B. Yuan**, "A new metric to assess temporal coherence for video retargeting", SPIE/COS Photonics Asia (pp. 92732Z-92732Z). International Society for Optics and Photonics, October. 2014.
8. B. Yan, **B. Yuan** and B. Yang, "Effective Video Retargeting with Jittery Assessment", *IEEE Transactions on Multimedia*, Vol. 16, Issue 1, pp. 272-277, Jan. 2014. (TMM14)