Jack Yanxin Li

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Objective

To further my knowledge and career and to make great contributions to current and future work related to distributed computing.

Education

Georgia Institute of Technology Aug 2010 - Present
PhD Student in Computer Science Advisor: Calton Pu

Duke University Aug 2006 - May 2010
BSE in Electrical and Computer Engineering
BS in Computer Science
BS in Economics

Work Experience

Liferay Inc. Software Engineer Intern
Los Angeles, CA May 2010 - April 2011
- Creation of new Liferay features including QuickBooks integration, credit card processing API, Amazon Web Services plugin, and video conferencing integration - Created and tested framework for deploying Liferay on Amazon EC2 cloud - Debugged and fixed Liferay source code

Fooala, Inc. Software Engineer
Durham, NC Sept 2008 - May 2009
- Developed a web service platform for food order processing using Ruby on Rails - Extended OAuth plug-in to handle OAuth token sharing for multiple service providers

Verizon Telecommunications Verizon Summer Intern at Duke University
Durham, NC May 2007 - July 2007
- Conducted research in the fields of mobile social networking
- Programmed a multihop sensor application on Berkeley sensor motes
- Developed a human mobility tracking prototype using GPS sensors
- Gave a presentation of my work at Verizon Labs in Waltham, MA

Publications

Refereed Papers

- Jiaxing Zhang, Hucheng Zhou, Rishan Chen, Zhenyu Guo, Haoxiang Lin, **Jack Li**, Wei Lin, Jingren Zhou, and Lidong Zhou. *Optimizing Data Shuffling in Data-Parallel Computation by Understanding User-Defined Funtions.* In the 9th USENIX Symposium on Networked Systems Design and Implementations (NSDI), 2012.
- Deepal Jayasinghe, Simon Malkowski, Qingyang Wang, **Jack Li**, Pengcheng Xiong, and Calton Pu. *Variations in Performance and Scalability when Migrating n-Tier Applications to Different Clouds.* In the 4th International Conference on Cloud Computing (CLOUD), 2011.
- Simon Malkowski, Markus Hedwig, **Jack Li**, Calton Pu, and Dirk Neumann. *Automated Control for Elastic n-Tier Workloads based on Empirical Modeling.* In the 8th International Conference on Autonomic Computing (ICAC), 2011.
- Shravan Gaonkar, **Jack Li**, Romit Roy Choudhury, Landon Cox, Al Schmidt. *Micro-Blog: sharing and querying content through mobile phones and social participation.* In the 6th International Conference on Mobile Systems, Applications, and Services (MobiSys), 2008.

Research Experience

Georgia Institute of Technology Graduate Research Assistant
Atlanta, GA Aug 2010 - Present
- Member of the Elba group under Professor Calton Pu
- Currently working on disproving linear consolidability assumption in multitier applications and automated control of elastic workloads using empirical modeling data
- Ran large-scale experiments that test different N-tier application configurations running in cloud environments
- Analyzed data in experiments to find scalability issues and performance bottlenecks
- Used black box approach and statistical classifiers to detect new multi-bottleneck phenomena

Microsoft Research - Asia Graduate Research Assistant
Beijing, China May 2011 - Aug 2011
- Research in the optimization of parallel computing architectures

- Developed and analyzed new optimizations in Microsoft SCOPE
- Co-author in a paper published in NSDI 2012

Duke University Institute for Genome Science and Policy Research Assistant
Durham, NC Sept 2008 - May 2010
- Member of the Dave lab under Sandeep Dave M.D.
- Programmed an application to cluster gene pathways based on statistical significance to diagnose which drugs should be used to treat various cancers
- Created an automated application that ran gene clusters and predicted and validated samples using binary regression models combined with singular value decompositions and Bayesian techniques for Stochastic regularization

Duke University Research Assistant
Durham, NC May 2008 - July 2008, Jan 2010 - May 2010
- Member of the Ques project under Professor Shivnath Babu
- Implemented new feature in the Hadoop Distributed File System rebalancer to rebalance nodes based on block usage - Constructed and simulated a queueing model for a self-maintained database
- Created a s̈elf-healingP̈ostgreSQL database with Java, Shell Scripting, and Perl
- Co-authored demo that was presented at ICDE 2009

Duke University Research Assistant
Durham, NC May 2007 - May 2008
- Member of the SyNRG group under Professor Romit Roy Choudhury
- Programmed MicroBlog application on Symbian OS
- Wrote and conducted mobility simulation of MicroBlog in Java and C#
- Co-authored paper that was published in MobiSys 2008

Skills

Computer Languages
Java, C#, C++, C, Python, Perl, Shell, Django, Ruby on Rails, PHP, Javascript, HTML, XML

Software and Platforms
Eclipse, MySQL, PostgreSQL, Liferay Portal, Hadoop, Amazon EC2, Linux, Solaris, Windows, Mac OS X

Languages
English (fluent), Cantonese (fluent), Mandarin (fluent), Spanish (working knowledge)