

Can Zhang

CONTACT INFORMATION

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FIELDS OF INTERESTS

Storage Systems; Database Systems; Distributed Systems

EDUCATION

School of Software, **Shanghai Jiao Tong University (SJTU)**, Shanghai, China

- M.S. Computer Applied Technology GPA: **2.63/3.3**, Rank: **4/116** **2012.03**(expected)
- B.E. Software Engineering GPA: **89.3/100**, Major: **90.0/100**, Rank: **3/110** **2009.07**

RESEARCH EXPERIENCE

Research Assistant, REliable INtelligent and Scalable Systems Group (REINS), SJTU **2009.09 - Present**

Topic: On-Demand Scalability Problem of P2P Data Stores in Cloud (Master's thesis)

- Designed an algorithm for P2P data stores deployed in cloud to scale up or down according to system workload
- Applied the algorithm to Open Chord, an open-source implementation of Chord DHT protocol
- Used the WorldCup98 logs as the dataset to simulate client query requests to verify effectiveness of the algorithm
- Summarized the work and wrote a research paper (published in proceedings of DASC2011)

Research Assistant, REINS, SJTU **2008.09 - 2009.07**

Topic: Service Evaluating and Discovering on the Internet

- This project was to resolve problems of service discovery and ranking according to Quality of Service (QoS), supported by National High-Tech Research Development Program (863 program)
- My main responsibility was designing and implementing an algorithm for dynamic service substitution in Service-Oriented-Architecture (SOA) applications
- Summarized my work and wrote a research paper (published in proceedings of APSCC2011)

Project Leader of Summer Research, Embedded Technology Lab, SJTU **2008.07 - 2008.08**

Topic: Visualization of Multi-threaded Programs based on Detours

- Our group implemented a Visual Studio 2005 plug-in, which displayed behaviors (create, sleep, wait/notify) of threads in a swim lane diagram by intercepting the Win32 APIs with Detours developed by Microsoft Research
- My responsibility was to resolve key technical problems like interception of Win32 APIs through Detours tool and inter-process communication between user programs and the plug-in
- Organized weekly team meetings; Documented our work and wrote a technical report about Detours

SELECTED COURSE PROJECTS

Course projects for Neural Network Principles and Application (Java) **2010.03 - 2010.06**

- Used perceptron network to solve a classification problem with four classes of input vectors
- Implemented the back propagation (BP) algorithm with Java to solve the two-spiral problem
- Implemented multi-class SVM classification based on the LibSVM package

Paralleled CF (Collaborative Filtering) algorithms (Matlab) **2010.03 - 2010.06**

- Parallelized two memory-based CF algorithms (with Pearson Correlation and with Vector Similarity) with MatlabMPI, a Matlab implementation of the standard MPI interface
- Tested performance of the two parallelized CF algorithms with EachMovie Data Set

Website Diagnoser (Java) **2008.03 - 2008.07**

- Our group designed and implemented a website diagnoser, which examined possible vulnerability of a website to malicious attacks like SQL injection, and generated diagnosis reports
- Designed SQL injection strategies to examine a webpage, and implemented the SQL injection module
- Our program found bugs in about 10 active websites in our university with the SQL injection strategies

Summer project - Knight Moves (Java) **2007.07 - 2007.08**

- Designed and implemented three algorithms to find the minimum number of moves needed for a knight to reach one point from another in chess; Displayed these algorithms with Java Swing
- My program ranked 2nd among 108 Java solutions of the problem No.1915 in PKU JudgeOnline system

5-tier Stock Simulation System (Java) **2007.03 - 2007.07**

- Designed and implemented database schema in Derby with SQL
- Designed and implemented interface for clients to access database by wrapping JDBC APIs

TEACHING EXPERIENCE

Teaching Assistant for Programming & Data Structure (2)	2011.03 - 2011.07
Teaching Assistant for Programming & Data Structure (3)	2010.09 - 2011.01
Teaching Assistant for Software System Architecture	2010.09 - 2011.01
Teaching Assistant for Programming & Data Structure (2)	2010.03 - 2010.07

ACADEMIC ACTIVITIES

Eminent Award in “I Generation” Youth Integrity Programme, Hongkong	2010.03.10 - 12
<ul style="list-style-type: none">Built and led a three-people team of members from School of Software and Institute of FinanceSurveyed the development of e-commerce and wrote an essay about how to maintain integrity of both online tailors and consumers in the virtual world	
First prize in the 2008 CRDC-SJTU Innovation Competition, Shanghai	2008.07
<ul style="list-style-type: none">Proposed a detection mechanism of network traffic anomaly with another two teammates, and finally won the first prize in the CRDC-SJTU Innovation Competition sponsored by Cisco systems Research & Development CenterJoined CRDC summer camp and collected real data on routers in Cisco under the supervision of Cisco colleagues	

CONFERENCE PRESENTATION

Presented the paper ‘ALARM: Autonomic Load-Aware Resource Management for P2P Key-value Stores in Cloud’ on the conference CGC2011, Sydney, Australia	2011.12.12 - 14
Presented the paper ‘A Closed-loop Mechanism for Service Evaluating and Discovering on the Internet’ on the conference NCM2009, Seoul, Korea	2009.08.25 - 27

INTERNSHIP EXPERIENCE

Software Developer Internship , Mycasheveryway Ltd, Shanghai	2008.11 - 2009.05
<ul style="list-style-type: none">Acted as a developer of the administration pages for the Shriip project, an online money transfer platformActed as a tester of the Shriip project: JUnit test of critical Java Beans, and manual test of the complex money transfer processes involving different currencies in various scenariosWorked in an English environment: mainly collaborated with a German engineerKey technologies: JavaServer Faces (jsf), MySQL, Tomcat, JUnit	

HONORS & AWARDS

National Scholarship (first-class) (top 5%, highest scholarship in China), 2010
CASC Scholarship for excellent college students (second-class), 2010
Outstanding Teaching Assistant (3 out of about 70), 2010
National Scholarship (second-class), 2009
Jiangsu Software Scholarship (146 winners nationwide), 2008
Excellent Academic Scholarship (second-class) (top 10%), 2006, 2007, 2008
National Scholarship, 2007

STANDARDIZED TESTS

TOEFL iBT (07/23/2011):	Reading: 28 , Listening: 25 , Speaking: 20 , Writing: 27 , Total: 100
GRE (06/11/2011):	Verbal: 620 (89%) , Quantitative: 800 (94%) , Analytical Writing: 4.0 (48%)

PUBLICATIONS

Can Zhang , Haopeng Chen, Shuotao Gao, ALARM: Autonomic Load-Aware Resource Management for P2P Key-value Stores in Cloud, 2011 Ninth IEEE International Conference on Dependable, Autonomic and Secure Computing, Sydney, Pages:404-410, Australia, 2011.12.12-2011.12.14, ISBN: 978-0-7695-4612-4/11
Can Zhang , Haopeng Chen, Jinbo Du, A Tabu Search Approach for Dynamic Service Substitution in SOA Applications, 2011 IEEE Asia-Pacific Services Computing Conference, Pages:284-289, Jeju, Korea, 2011.12.12-2011.12.15, ISBN: 978-0-7695-4624-7
Hao-peng Chen, Guang Yang, Can Zhang , A Closed-loop Mechanism for Service Evaluating and Discovering on the Internet, NCM 2009 - 5th International Joint Conference on INC, IMS, and IDC, p 1-8, 2009