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Education

Jul.2015-Present   M.Sc. (Technopreneurship & Innovation), Nanyang Technological University.

Major in Entrepreneurship & Business Planning, Marketing, Intellectual Property, Accounting，New Venture Creation, Venture Capital Financing, Strategic Management, Human Resource and Corporate Finance, etc.

Sep. 2010-Apr. 2013   Recommended as an exemption graduate student with full scholarship. M.Eng (Computer Applied Technology), Tianjin Polytechnic University (TJPU).   **GPA: 3.32/4**

May.2012-Aug.2012   Exchange student, S. Computer Engineering, Nanyang Technological University (NTU)

Oct.2008-May.2010   Intl. Software Engineer Training (JAVA), Oriental Standard Intl. IT institute

Sep. 2006-Jul. 2010   Bachelor's Degree in Computer Science and Technology, TJPU.   **GPA: 3.61/4**

Project Experience

Aug.2014- Present   Research Associate (Database and J2EE developer), Energy Research Institute @NTU.

- Team Leader, founded the ICT Team. Take charge of writing proposals for various competitive energy-related grants and liaise with NTU Profs and Singapore government agencies i.e. NRF, IDA, EMA, EDB, JTC, etc. Currently leading the software development for the single largest grant from NRF – Smart Muilti-Energy System (SMES) with amount of 20 million SGD. Developed web-based applications on J2EE and Python integrated BMS, Hybrid AC/DC MicroGrids, renewables and battery systems result in increasing the energy efficiency by 15%. With advanced wire sensor network and metering systems, built the ERIAN Energy Could platform. Maintaining the on-premises intelligent and integrated multi-energy systems of NTU campus. Refactored the software architecture with MVC-pattern, multi-tier architecture, Caching for web pages, server clusters, database design and optimization. Responsible for project budgeting, proposal writing, Git server control, hiring and routine management. Published 4 research papers with high quality. Project Website: http://ict.eri.ntu.edu.sg/
- Environment and Language: JAVA, Python, Cassandra, AngularJS, JPA, SpringMVC, Lunix
- **Selected Publications**:
  [1] **Yuanbo Zhu**, Dominic Maurath, Longqi Zhang,*et. al.* An Intelligent Microgrid Energy Management System Using Distributed Database and IEEE. IEEE 40th Annual Computer Software and Applications Conference (*COMPSAC*). Atlanta, USA.pp.344-347, 2016.
  [2] Dominic Maurath, **Zhu Yuanbo**, Shu Weiqi, Zhang Longqi, Koh Leong Hai, Choo Fook Hoong. A Distributed Energy Cloud Concept for Real-time Multi Energy Integration And Facility Optimization. World Engineers Summit on Climate Change (WES 2015).

Feb.2014- Jul.2014   Design and Implementation of Industrial Cloud App Store, Beijing Computing Center.

- Quickly created the diagrams of interaction flow, redesigned the website prototypes and page-layouts of an app store of Industrial cloud computing, by utilizing tools such as Axure, Xmind, etc. In charge of the security module and database design of the website, I used CAS and HTTPS to achieve single-sign-on. The security framework Apache Shiro was utilized to secure our applications. HAProxy was employed to achieve high availability and load balancing. The website also supports the open protocol OAuth2.0.   http://www.chinahypercloud.com/
- Environment and Language: Linux, Oracle, Tomcat, CAS, Struts2, Spring, Hibernate, HAProxy
- **Publications:** Wei LI; **Yuanbo ZHU**; Ming ZOU, Applied Research of Single Sign On Technology in Cloud Services. *Applied Mechanics & Materials*. 2014, Issue 602-605, p3552-3555.

Jun.2013- Feb.2014   Research and Development Department, Beijing Computing Center.

- Worked as the development manager of the project General Billing Platform for Cloud computing, I was in charge of the technology selection and building the architecture. I participated in the design of product model and the development of target system as well. This project worked on the basis of Springside, which includes Shiro security framework, Quartz timer, Spring data JPA and Hibernate, etc. RESTful API is provided in our project as well.
- Environment and Language: Eclipse, Maven, Java, SpringMVC, Spring, JPA, JQuery, Mysql, Ubuntu

May.2012-Aug.2012   Centre for High Performance Embedded Systems, Nanyang Technological University.

- **Reconfiguration Techniques for Fault Tolerant Mesh-connected Embedded System.**

- Worked as a research student with NTU, devised novel fault-tolerant techniques to enhance the reliability of the embedded systems, especially, the reconfiguration approaches for two-dimensional fault-tolerant mesh. Proposed algorithm combined dynamic programming and greedy strategy, it can efficiently derive a maximal sized healthy sub-array from the defective host array and improve the performance of the resulting embedded system.

- Environment and Language: Linux, C, GCC, Embedded systems

- **Selected Publications:**   Yuanbo Zhu, Jigang Wu, Siew-Kei Lam and Thambipillai Srikanthan, Reconfiguration Algorithms for Degradable VLSI aArrays with Switch Faults, International Conference on Parallel and Distributed Systems (*ICPADS*), pp. 356-361, Singapore, 2012.

Sep.2010-April.2012   Centre for High Performance Systems, Tianjin Polytechnic University.

- **Effective Fault-tolerant Techniques on Reconfigurable Meshes, Projects of National Natural Science Foundation (NSF) of China under Grant No. 60970016 and No. 61173032.**

- Made the first contribution in solving the reconfiguration on degradable processor Arrays with faulty switches. Utilize Efficient Heuristics to accelerate the reconfiguration processes. By approaching dynamic programming, we proposed temperature-aware fault-tolerance techniques for constructing the optimal target subarray. More than ten high quality research papers were published on well-known intl. journals and conferences.

- Environment and Language: Linux, C, GCC, Algorithm, Embedded systems

- **Selected Publications**:

  [1] **Yuanbo ZHU**, Jigang WU, Guiyuan JIANG, Ke CHEN, Efficient Heuristics for Minimizing Reconfiguration Overhead on VLSI Arrays with Faults. *Journal of Computational Information System*s (JCIS), Binary Information Press, USA, 8: 16 (2012) 6679-6686. (**Best Paper Award)**

  [2] **Yuanbo Zhu**, Wu Jigang, Siew-Kei Lam, T. Srikanthan, Preprocessing Technique for Accelerating Reconfiguration of Degradable VLSI Arrays. IEEE International Symposium on Circuits and Systems(*ISCAS*), pp. 2424-2427, Beijing, 2013.

  [3] Wu Jigang, **Yuanbo Zhu**, Zhipeng Niu, T. Srikanthan, Constructing Low Temperature Subarrays on reconfigurable VLSI Arrays, *Journal of Circuits, Systems, and Computers* (*JCSC*), World Scientific Publishing Co. Singapore. Vol. 23, No. 5 (2014) 1450067 (18 pages)

Sep.2012- Nov.2012   【Internship】 Datang Telecom Technology Co.

- Utilizing microphone and audio input to realize the data input, data output and human-computer interaction by multi-threading and establishing transferring protocol on **Android** platform for various mobile phones.

- Environment and Language: Eclipse 3.4.1, Android 4.1, ADT-15.0.1, Java 6.0

Mar.2011- Dec.2011   【Practical Project】 The Development and maintenance of The website of 4th PAAP

- Design, master and maintain the website of The Fourth International Symposium on Parallel Architectures, Algorithms and Programming (PAAP 2011), which was held in Tianjin, China, during December 9-11, 2011.

- Environment and Language: Win Server 2003, Mysql, Java, Struts2, JSP, JavaMail

Mar.2010- Jun.2010【Practical Project】 Design and Implement of Student Management Platform

- In charge of this project. Include system design and analysis, budgeting, coding, testing and maintaining. And won the Excellent Graduation Thesis of TJPU. The URL: http://jsjxs.tjpu.edu.cn

- Environment and Language: JSP, Spring+struts2+Hibernate(SSH) , Oracle, JQuery & AJAX,Junit

Dec.2009-Mar 2010 【Internship】 Dalian Hi-Think Computer Technology, Corp.

- **One Province's Tax Administration System in Japan.**

- In charged of **Oracle** Database Design, write stored procedures and SQL queries, write technical documents and master software development process, worked as a team leader of interns.

- Environment and Language: Linux server, Oracle Data base, Java, VBA

July.2009- Oct.2009   【Internship】 Berheley Software Design Co., Ltd

- **Distance Education Platform of the Education Department in China.**

- Utilized the OSCache framework to optimize Web page, Business logic optimization and later system testing.

- Environment and Language: MyEclipse. Java, JSP, OScache, JavaScript, Junit

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Social Practice

- Built the website for Advanced Monitoring and Analytics for Gas Pipeline http://freerambo.com/gas
- Built the website for Measurement and Verification of Chilled-water Plant   http://freerambo.com/plant
- Developed an IOS mobile app Weknow that discover and share knowledge via images http://youtu.be/uzabkv_e_dw
- **Facilitator** for NYAA-GAHA Integration Project of Singapore 2014
- 2009-2010 Part-time Instructor and Teaching Assistant, at School of Computer Engineering, TJPU
- 2007-2008 President of Future Social Entrepreneur Association, Tianjin Polytechnic University

Professional Skills

- **Computer engineering skills:** Solid Java Web Programming, J2EE, Spring framework, Oracle, System Security and Cloud Computing; Good knowledge of OOD, Software Architectures and UML, Python, Android, Html5, RESTful & NoSQL. Familiar with C++, AngularJS, PHP, computer architecture and Algorithmic Design.
- **Language skills：** Native speaker in Chinese; English as working language, speaking and writing fluently; **CET-6; GRE(revised): V 150/170, Q 161/170, AW 3.0/6;**   Beginning level in Japanes**e.**
- **Social Skills:**   Driving license C1; KAB; Good at swimming & playing basketball
- **Other skills:**   Eclipse, Axure,Xmind, Latex, Matlab, Rational Rose

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Honors & Awards

- 2013-2014 **The Excellent Master Dissertation of TJPU**
- 2012-2013   Won the TJPU Science and Technology Progress Award (only two students of each school)
- 2011-2012 **Best Paper Award** of National Conference on Theoretical Computer Science (NCTCS 2012)
- 2009-2010   Merit Student and Excellent Graduate papers of Tianjin Polytechnic University (1%);

  Won the second prize in National Computer programming Contest.
- 2007-2009   Merit Student and Three Consecutive Years of First class scholarship of TJPU (5%)
- 2007-2008   Won the First Prize in Mathematical Contest of Tianjin Polytechnic University. (5%)