Zhe Yao
CURRICULUM VITÆ

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SKILL

- I speak various languages (C/C++/Python/Java/JavaScript/Matlab) and understand different paradigms (Procedure/Object/Generic Programming).
- I do machine learning and large scale data analysis and processing on both CPUs and GPUs.
- I have been a Linux administrator and a heavy daily user for over 10 years.

EXPERIENCE

Nov,2014 – present

Software Developer, *Montreal Neurological Institute, McGill University*, Montreal, Canada.
- cross platform and architecture software porting using C/C++
- multi-threading, inter-process communication and event driven programming

March,2014 – present
Jan,2012 – May,2012

System Administrator, *Centre for Intelligent Machines, McGill University*, Montreal, Canada.
- programming and procedural scripting using C/C++/Python/Bash
- system maintenance and server administration
- network failure recovery, software and hardware troubleshooting

Oct,2007 – Mar,2008

Quality Assurance Engineer, *Gemini Mobile Technologies, Inc.*, Beijing, China.
Gemini is a Silicon Valley based company targeting at wireless communication, messaging and gaming market.
- multimedia message gateway for South America telecom operators C/C++/Python
- new testing framework, toolkits and test cases using Python/Bash
- training materials for other new employees
- interviewer for the company

Jun,2006 – Aug,2006

System Engineer, *Xiaotong Electronic Technologies, Inc.*, Jiaxing, China.
- China Unicom cellphone base station maintenance
- system configuration and performance optimization
- multimedia conference room solution design

Jan,2006 – Mar,2006

Network Engineer, *Information Department of Administration Center*, Jiaxing, China.
- network congestion management
- database and information management
- software and hardware troubleshooting

Sep,2009 – present

Research Assistant, *Department of Electrical & Computer Engineering, McGill University*, Montreal, Canada.
Neural Networks, Machine Learning and Anomaly Detection

Sep,2010 – Apr,2012

Teaching Assistant, *McGill University*, Montreal, Canada.
ECSE 321 Introduction to Software Engineering
ECSE 518 Telecommunication Network Analysis
- lecture syllabus, office hours and tutorials
- course projects, assignments and examinations

Sep,2006 – Jun,2007

Graduate Assistant, *Beijing University of Posts & Telecommunications*, Beijing, China.
- university information system
- department archives and records
- certificates and diplomas for graduated students

Jun,2003 – Aug,2003

Intern, *China Mobile Communication Corporation (CMCC)*, Jiaxing, China.
- China Mobile cellphone base station maintenance
- station center renovation and transition

PROJECT

2012 – present

Clustered Sparse Associative Memories, *Research Project.*
- accelerate the retrieving algorithm using GPUs by 1000x
- significantly improve the effectiveness of the model
- extend the model to cope with corrupt input
- complete 3 journal manuscripts and 1 conference paper

2010 – 2012	**Anomaly Detection**, *Research Project*.
	○ design an anomaly detection scheme using proximity graph and PageRank algorithm
	○ publish 1 journal manuscript
2008 – 2009	**WAVE 802.11p Research & Analysis**, *Laboratory Project*.
	○ investigate IEEE 802.11p and IEEE 1609 series drafts
	○ research position based inter-BSS transition trigger condition
	○ design a patent channel switching scheme
2008	**Wireless Network QoS & Customer Perception Feedback System**, *Laboratory Project with CMCC*.
	○ work as the project leader
	○ design and develop the control center using Java
	○ build the platform for team members using Java/C/C++
2007 – 2008	**ZigBee Lighting System**, *National 863 Project*.
	○ investigate IEEE 802.15.4 MAC & ZigBee protocol stack
	○ design an embedded system with a Freescale ZigBee module
	○ implement a remote lighting control system using C/C++
2004 – 2005	**MPLS Label Edge Router with SNMP Protocol**, *University Project with ZTE*.
	○ extend MIB according to IETF RFC 3812/3813/3814 and relevant standards
	○ customize Linux kernel and implement a MPLS router using C/C++
	○ complete a web interface using SNMP protocol for remote control

EDUCATION

Sep,2009 – present	**PhD candidate**, *McGill University*, Montreal, Canada.
	Department: Electrical & Computer Engineering
	Supervisor: Prof. Michael Rabbat
Sep,2006 – Apr,2009	**Master**, *Beijing University of Posts & Telecommunications*, Beijing, China.
	Department: Information & Communication Engineering
Sep,2001 – Jun,2005	**Bachelor**, *Nanjing University of Posts & Telecommunications*, Nanjing, China.
	Department: Communication Engineering