Lu Shengliang

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Education

B.Eng. Computer Engineering — GPA 4.53/5.00 *Anticipated Graduation: May 2016*
***NTU**, Nanyang Technological University*, Singapore

Experience

Internship, Building of a GPU Computing Research Cluster *Jul 2015*

- Attached to Rapid-Rich Object Search Lab, NTU
- Used Rocks cluster distribution
- Configured head node and compute nodes network connections
- Used Docker for Cuda GPU computing and LXC for resources provision and control
- Provided solutions for user management
- Worked nearly without supervision

URECA Project, Study of Healthcare and Wellness Science using Wearable Sensors through Scientific Literature Approach *Sep 2014 - Jun 2015*

- Attached to Neural & Biomedical Technology Department (A*star I^2R Singapore)
- Developed a text mining tool using Perl & Python for analyzing research publication abstracts
- Used Regex and simple data structures
- Solved case studies of 300,000 samples within 1 minute
- Fortified biomedical text mining by deploying web crawler
- Distinguished text mining situations using biomedical and multidisciplinary case studies
- Supervised by Associate Professor Wang Ping and Dr. Ge Yu

Internship, Development of Secure Thin Client for ATM *Dec 2014 - May 2015*

- Modified and installed XtratuM Hypervisor on x86 PC
- Developed a Linux USB device driver
- Developed an ATM GUI client using Qt/C++
- Compiled and installed Linux kernel into XtratuM
- Used Makefile, Bash and Perl scripts

Contestant, 2013 ACM-ICPC Asia Jakarta Regional Contest *Oct 2013*

- Used Java Programming Language
- Participated representing School of Computer Engineering NTU
- Solved 3 problems (in team)

Contestant, National Olympiad in Informatics, China *Jul 2010*

- Used Pascal Programming Language

- Solved algorithm problems under Linux environment
- Won Bronze medalist

Contestant, National Olympiad in Informatics in Provinces, China *2006 - 11*

- Used Pascal Programming Language
- Solved algorithm problems under Windows environment

Coursework Highlights

- Managed an online invigilation software development
  - Agile Project development manager
  - Multithreaded, asynchronous video server development in Java
- Built a robotic system that can autonomously explore and traverse unknown areas (in a team of eight)
  - Chief Arduino Engineer/Hardware Leader
  - Exploration algorithm & obstacle detection algorithm
  - Arduino programming, Motor control, Sensor detection
- Implemented a five-stage pipelined CPU with MIPS instruction set under simulation in Verilog
  - Hazard detection & data forwarding
  - Static branch prediction & out-of-order execution as enhancements
- Implemented TLB based on understanding of Operating System concept
  - Nachos (C++ version) OS environment
  - Searching & replacing algorithm programming
- Designed and constructed a blood pulse wave data acquisition system
  - Signal conditioning, data acquisition
  - Post processing & graphic display in MatLab

Leadership Activities

Vice President, NTU Dragon & Lion Dance Troupe *Aug 2013 - 14*

- Top tier club under Cultural Activities Club
- More than 40 active members
- Organizer of nationwide lion dance competition

Founder & Leader, ACM-ICPC Asia Jakarta Regional Contest team "FSM" *Oct 2013*

- Self-organized training without supervision

Skills

Programming: C/C++, Perl, Java, Python, Shell, Assembly, Verilog, Pascal

Operating Systems: Linux full-time user, Windows

Hardware Platform: Arduino, ARM Cortex development board, FPGA