

Employment

Software Architect LUMO Connections Nov. 2016 – Apr. 2017

Lamp for Long Distance Relationships

- Built up a Node.js communication system including a client on Raspberry Pi and a server on Amazon EC2
- Responsible for design and implementation of communication module that integrates with WiFi manager and sends real-time messages via WebSocket on ESP8266 (NodeMCU)

Software Engineer, Researcher Aalto University Sept. 2011 – Oct. 2016

Adaptive 6LoWPAN Packet Size Control (2014 - 2016)

- Developed a SciPy tool to process massive measurement data and analyze 6LoWPAN fragmentation issue
- Designed and implemented a *first linear then exponential* packet size control mechanism that improves throughput by 40% in best case
- Published and presented a paper in EWSN2015 (best conference on wireless sensor networks in Europe)

Multicast for Constrained Networks (2013 - 2015)

- Implemented a simplified IPv6 Multicast Listener Discovery on Contiki OS
- Established a testbed for MPL (RFC7731) and evaluated its performance against flooding
- Designed and implemented a simple multicast protocol for constrained networks based on PIM-SSM

MAMMoTH - Massive Scale Machine to Machine Service (2011 - 2013)

- Implemented a basic HTTP-CoAP mapping layer on Contiki OS
- Deployed around 1000 emulated constrained devices to verify the scalability of the platform

Software Engineer Nokia Research Center, China Nov. 2008 – Aug. 2011

Rich Context Mobile Platform (2010 - 2011)

- Designed and implemented a publish-subscribe messaging mechanism and a QT GUI on N900 device
- Filed a patent (US 20140237486 A1) on inter-widget communication

Handwriting Calculator (2009 - 2010)

- Developed GTK+ GUI (including formula display and stylus gestures) on Maemo platform
- Published on Nokia Beta Labs and won outstanding project award

Software Test Engineer, Intern IBM Corporation, China June 2008 – Aug. 2008

- Localization and globalization testing for IBM Lotus software
- Developed a Perl tool to detect empty translations of the content

Additional Experience

- Web Developer (2016): Built an e-commerce website (store.kanssani.fi) by WooCommerce
- Website Administrator (2012 - 2016): Maintained a forum for CSSA-Espoo (once largest Chinese student community in Greater Helsinki area)
- Teaching Assistant (2015): Taught two course assignments (P2P networking and WiFi indoor positioning)

Education

Espoo, Finland Aalto University Sept. 2011 – Aug. 2016

- Licentiate degree candidate in Computer Science and Engineering. GPA: 4.77/5

Beijing, China Beijing University of Posts and Communications Sept. 2003 – Apr. 2010

- M.S.E in Computer Networking, April 2010. GPA: 4.0/5
- B.S.E in Computer Science and Engineering, June 2007. GPA: 4.4/5

Skills

- Languages: C; C++; Java; Unix Shell; Python; PHP; JavaScript; XML; HTML/CSS; SQL
- Platform: Unix/Linux; Contiki/Arduino embedded devices
- Networking: 802.15.4; 6LoWPAN; TCP/IP; HTTP; CoAP; RESTful API; Apache
- Tools: GNU Make; Git