github.com/dyrobin
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YANG DENG

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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 Tester, 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: Makefile; Git