

# Hongkai Liu

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## SUMMARY

- Enthusiastic about both theoretical and practical work in IT industry. Strive to work with and learn from the best people in the area. Recognized for positive attitude, self-starter, and team spirit.
- Ph.D. in Computer Science. 5+ years' experience in Artificial Intelligence and Knowledge Representation including Description Logics, Action Formalisms, and Temporalized Logics.
- 4+ years' experience in software architect and development. Standardization of client-server protocols. Solid knowledge on Java programming. Proficient in developing Android Apps. Familiar with frameworks such as Spring, Hibernate, and MyBatis.
- 1+ years' experience in data ETL with Kafka, Logstash, Redis, Apache Hadoop and related tools/projects such as Hive and Impala. Adept at installation, management and maintenance of Cloudera Distributed Hadoop.
- Familiar with TDD and unit testing framework such as JUnit; Experience with maintaining and distributing applications on Linux server;
- Proficient in English. Native Chinese and basic German.

## WORK EXPERIENCE

**Elits Canada Inc., Canada.**

Mar. 2015 to now

**Software Developer** (Consultant at Ericsson)

- HAJP2: an [open source](#) project providing high availability to Jenkins cluster.
- Jenkins Spy: a Jenkins plugin to help analyzing the performance of Jenkins.

**Environment:** Core Java 8, Scala, Guice, JUnit 4, Cucumber, IntelliJ, Linux, Gerrit/Github, Maven 3, Jenkins/TravisCI, Jira/Taiga, SonarQube, Docker, Ansible, and Vagrant.

**Lenovo Corp. Research & Development, China.**

Nov. 2013 to Nov.

2014

**Development Architect**

- Infrastructure design and implementation of Lenovo Push Client. System integration on Lenovo Android-based smartphones/Tablets and Lenovo Service Framework. The Client is implemented with **Android SDK** and supports level 9 or above.
- Design and development of the Data Reporting System based on **Kafka**, **Logstash**, **Redis** and Hadoop-based software such as **Hive** and **Impala**. The Push Server is responsible for over 2 million data records per day and those data are collected, analyzed and visualized by the system and reported to the business team. The intermediate results computed by the scheduled Hive tasks are stored in **MySQL** database and **RESTful web services**, implemented with **Core Java**, **Spring**, **Netty** and **MyBatis**, provide access to the data in the database.
- Implementation of Real-Time Monitoring System which integrates **Kafka** and **Mdrill** (open source project by Alibaba). The system offers **ad-hoc query answering** to the logs, over 2 billion per day, from Nginx clusters and is able to detect the change on the cluster load up to minute. The implementation is based on **Core Java**, and **Spring**.
- Project management, performance tuning, and integration planning with business partners.

**Environment:** Core Java 6, Android SDK, MySQL 5.1, CDH 4.6.0, Mdrill 0.20.9, Redis 2.8.13, Kafka 2.8.0, Logstash 1.4.2, Spring 3, MyBatis 3.1.1, Netty 3.7.0, JUnit 4, Eclipse, Linux, SVN, Git/Gerrit, Maven 3, and Hudson.

**Beijing Leadtone Wireless Co., Ltd, China.**

Sep. 2010 to Sep. 2013

#### Senior Software Developer

- Algorithm design and implementation with **Core Java** and **MySQL** to provide intelligent polling time of POP3 mailboxes. The algorithm is responsible for detecting user's email sending/receiving behaviors, configuring and updating user priority on the polling server which checks the user's mail server periodically. The goal of the algorithm is to achieve the tradeoff between the server load and the delay of notifying the arrival of new emails. The ORM framework used in this project is **Hibernate**.
- Protocol design of Leadtone push platform (based on the research and analysis on Apple's APNs and Google's C2DM) on Android, iOS, and WM devices. Prototyping Android applications on the platform with **Android SDK**.
- Leading integration on OX of Open-Xchange and Zimbra of VMWare, providing enterprise mail solution to small to medium sized businesses. Reporting bugs/requests, trainings, system maintenance after the deployment of OX.
- Implementation of back-end Web Applications and front-end web interfaces for users to manage their account information stored on an OpenLDAP server. Installation and maintenance of the **OpenLDAP** server. The OpenLDAP API used in the project is **Spring LDAP**.
- Protocol standardization with OMA AOI working group.

**Environment:** Core Java 6, Android SDK, MySQL 5.1, Spring 3, Hibernate 3, JUnit 3, Eclipse, Linux, SVN, Maven 3, and Continuum.

**Dresden University of Technology, Germany.**

Sep. 2005 to Aug. 2010

#### Research Assistant

- Engaged in the scholarly research project: Action Formalisms with Description Logics
- Supervise master thesis and seminars in the areas of Description Logics.
- Maintain and update the group website.

**Environment:** Core Java 5, Lisp, Prolog, LaTeX, HTML, Eclipse, Emacs, and Linux.

## CERTIFICATE

- VMware Certified Professional on vSphere 5 (VCP5) in Aug. 2012.
- IELTS: 7.5 in Sep. 2013.

## EDUCATION

- **Ph.D. in Computer Science**, Dresden University of Technology, Germany. Jan. 2010
  - Specialization: Description Logics, Action Formalisms, and Temporalized Logics.
  - Advisor: Prof. Franz Baader
  - Dissertation: *Computing Updates in Description Logics*
- **M.S. in Computer Science**, Dresden University of Technology, Germany. Mar. 2005
- **B.E. in Computer Science**, Anshan Science and Technology University, China. Jul. 2002

## PUBLICATION

- Hongkai Liu, Carsten Lutz, Maja Milicic, and Frank Wolter. Foundations of Instance Level Updates in Expressive Description Logics. *Artificial Intelligence*, 2011.

Full list of papers of academic conferences and workshops and thesis is available:

<http://lat.inf.tu-dresden.de/research/papers.html>