Luke Hornof
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Ph.D. in Computer Science with over 13 years experience in successful high-tech startups. Interests include social networking, mobile applications, and next generation Internet technologies.

## WORK EXPERIENCE

Feb 2012 - July 2013 Senior Software Engineer (BandPage, San Francisco, CA)

Designed and implemented backend server code for a system that supported 500,000 artists and 30 million MAU, including REST and graph BandPage APIs, artist search using Solr, and Amazon messages queues. Integrated with 3rd party APIs such as Facebook, Twitter, and CrowdFlower. Key technologies: Java, Spring, Hibernate, MySQL, AWS EC2/S3/SQS, XML, JSON, Eclipse, git, maven.

Nov 2009 - Nov 2011 Senior Software Engineer (adBrite, San Francisco, CA)

Designed and implemented software for the largest independent ad exchange, which served over 150 million impressions a day on over 60,000 sites. Worked on core server components that used Hadoop map/reduce generated predictive models to display inline, XML, and real-time video ads. Built a number of publisher, testing, and ad review tools. Key technologies: Java, PHP, MySql, MongoDB, HTTP/TCP, Javascript, JQuery, JSON, JSP, HTML, XML, CSS, Hadoop, tcpdump, wireshark, svn, git.

Feb 2003 - Nov 2009 Senior Software Engineer (Sun Microsystems, Santa Clara, CA)

Designed, implemented, and tested software for a video server, capable of storing 300,000 hours of content and delivering 160,000 2 Mbps mp4 streams. Agile software development included daily stand-up meetings, test-driven development, pair-programming, and continuous integration. Worked on core server components, CLI and GUI user interfaces, and end-to-end testing infrastructure. Key technologies: C++, design patterns, multiple threads, shared memory, Linux, Solaris, TCP/UDP, gdb, dtrace, valgrind, tcpdump, tcl/tk, svn. (startup Kealia acquired by Sun in April 2004)

Jul 2000 - Jul 2002 Senior Software Engineer (Transmeta, Santa Clara, CA)

Implemented and tested the world's first hardware implementation of the AMD-64 instruction set. This project required attention to low-level hardware details had a very aggressive schedule. Also built an abstract interpreter to validate x86 translations. Key technologies: C, Java, gdb, bash, perl, x86, AMD-64, cvs.

Jan 1998 - Jul 2000 Research Scientist (University of Pennsylvania, PA)

Created "self-specializing mobile code" that travels over the network and automatically optimizes itself to its destination environment, using type checking to verify its safety. Key technologies: C, gcc, TCP/UDP, static analysis, partial evaluation, type-checking.

## EDUCATION

1992 - 1997 Ph.D. in Computer Science (University of Rennes, France)
1988 - 1992 B.S. in Computer Engineering (Carnegie Mellon University)

## SELECT PUBLICATIONS

Self-specializing mobile code for adaptive network services. L. Hornof. International Working Conference on Active Networks, Lecture Notes in Computer Science 1942, Springer-Verlag, Tokyo, October 2000.

A study of large object spaces. M. Hicks, L. Hornof, J. Moore, and S. Nettles. International Symposium on Memory Management, Vancouver B.C., October 1998.

Partial evaluation for software engineering. C. Consel, L. Hornof, J. Lawall, et. al. ACM Computing Surveys, Symposium on Partial Evaluation, September 1998, vol 30, no 3.

Compiling Prolog to Standard ML: Optimizations. L. Hornof. Senior Honors Thesis, Carnegie Mellon Technical Report CMU-CS-92-166, September 1992.

(complete list at http://www.hornof.org/Technology.html)

INVITED TALKS

In addition to conferences and workshops, I have also presented my work at a number of research institutions, including Microsoft Research, Xerox PARC, Stanford, University of Washington, and the University of Copenhagen.