

Jeffrey M. Hagen

CONTACT INFORMATION

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PURPOSE

Seeking a challenging full-time development position at an industry-leading technology company that allows me to utilize my skills and enjoy technical challenges.

INTERESTS

Distributed Systems, Storage Systems, Database systems, Compilers, Network Servers, Network Security, Systems Security, Virtual Machines

TECHNICAL SKILLS

- Languages: C, Java, Python (and APIs), C++, Basic, Pascal, Unix/Linux system APIs, Win32 APIs, Unix shell scripts and assembly (MIPS and x86), CUDA
- Applications: GNU Development Tools, Personal Linux system administration software (Mandriva, Suse, Fedora, Oracle Enterprise Linux), Microsoft Visual Studio, Berkeley DB, Oracle Database (OLTP, XML DB), VMware Workstation, Parallels Desktop, emacs, L^AT_EX, common Windows/Mac/Linux database, spreadsheet, and presentation software
- Experience programming secure servers, asynchronous networks, designing secure networked systems, parsers/virtual machines for languages, and reverse-engineering x86 assembly
- Operating Systems: Unix/Linux, Mac (BSD), Windows.

SELECTED PROJECTS

- Currently implementing an unreleased XML-datastore backed application building environment with custom semantics.
- Previous Projects:
 - Designed peer-to-peer backup system where no-one is trusted. Implemented a Python based prototype of said system.
 - Implemented system-level wrapper function for memory management under Windows XP operating system.
 - Reverse engineered Windows-based DLL structures in order to determine use.
 - Designed and partially implemented a BitTorrent Client using a minimum of threads.
 - Interpreter for a string only programming language.
 - Unix compiler for a subset of C.
 - DOS mode graphics (2D) rendering API, with PCX graphics
 - DOS mode game using the aforementioned API

RELEVANT PROFESSIONAL EXPERIENCE

Oracle Corporation, Redwood Shores, California USA

Principal Member Of Technical Staff, Special Projects Group

March, 2012 - present

- Current ongoing project, not publicly released

Senior Member of Technical Staff, Special Projects Group

July, 2009 - March 2012

- Assisted in design/implementation of custom application design environment based on database-backed XML data store with Xquery user-level programming environment
- Rolled out internal deployment of the eXtensible Application Platform (XAP)

Member of Technical Staff, Special Projects Group

May, 2007 - July 2009

- Designed and implemented server components, including but not limited to the in memory document cache, system-level utilities and operating system dependent code.
- Cooperated with corporate partners and academia on publication and analysis of experimental results.
- Assisted new employees with transitional issues.

University of California, Santa Cruz, California USA

Teaching Assistant

September, 2005 - September 2007

Duties at various times have included:

- Assisted Professors with designing programming assignments
- Orchestrated review sessions and instructed a day of regular class without the Professor present

Courses Instructed:

- Introduction To Programming: Fall 2005
- Data Structures, Winter 2006
- Introduction To Operating Systems: Spring 2006, Fall 2006, Spring 2007
- Compiler Design: Fall 2006

Zone Labs, a division of Checkpoint, San Francisco, California USA

Client Team Development Intern

May, 2005 - August, 2005

- Developed a prototype memory space obfuscater to deter stack and heap based attacks.
- Reverse engineered selected Windows subsystems.
- Implemented user-space dynamic code-markup engine to protect system calls from unauthorized use within a program.

North County Regional Occupational Program, San Jose, California USA

Microcomputer Support Specialist

May, 2001 - December, 2001

Maintained, upgraded and rebuilt computers, and network infrastructure for the Regional Occupational Program (ROP) office staff

PUBLICATIONS

- Jeff Hagen. *Ladon: A Framework for Peer-to-Peer Backup*. 2009. Saarbrücken, Germany: VDM Verlag Dr. Müller, 2009.
- Tim Kaldewey, Jeff Hagen, Andrea Di Blas, Eric Sedlar. 2009. *Parallel Search On Video Cards*. Paper Presented at USENIX Workshop on Hot Topics in Parallelism (HotPar), Berkeley, CA, USA.
- Tim Kaldewey, Andrea Di Blas, Jeff Hagen, Eric Sedlar, Scott Brandt. 2008. *Memory Matters*. WIP Paper Presented at Real-Time Systems Symposium (RTSS), Barcelona, Spain.

EDUCATION

University of California, Santa Cruz, California USA

Masters in Computer Science, September 2007

- Advisor: Ethan L. Miller
- Member of Storage Systems Research Group
- Masters Project: Secure Distributed Backup
- Concentration in Storage Systems

University of California, Santa Cruz, California USA

Bachelors of Arts in Computer Science, May 2005

- Focus in Computational Theory
- Courses of note: Cryptography, Computer Security, Computability and Computational Complexity

OTHER INTERESTS *Volunteer Judge*

2002-2007

Official Judge for the STudents Recycling Used Technology (STRUT) Competition.

- Scored K-12 Students on Constructing PC computers from parts in annual competition.