Michael Cleaver

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SUMMARY

Currently a developer at Cray Inc.
Familiar with C/C++, Python, and Linux.

EDUCATION

B.S. in Computer Science, Ohio University, Athens, Ohio, November 2010
Concentration in web design
GPA 3.152/4.0

EXPERIENCE

Engineer II June 2013 to Present

- Worked in the OSIO Networking group on the ISV Aplication Acceleration (IAA) team, and the Realm Specific IP (RSIP) team.
- Designed and built a regression testing framework for verifying changes to the IAA libraries, and identifying conflicts between those libraries and the various Cray Linux Environment versions.
- Investigated bugs, documented reproducers, implemented bug fixes, and documented configuration of new features.
- Worked with Eclipse IDE, C/C++, Python, Cray Linux (SLES derivative), SVN, Git, GNU build tools, Intel build tools, and Cray supercomputers.

Teaching Assistant January 2011 to May 2013

- CS240A: Introduction to Comp. Sci.; CS210: Programming in C
- Instructed labs.
- Graded labs and lab projects.
- Lectured in professors' absence and proctored exams.
- Provided supplementary instruction for students during office hours.

Developer July 2011 to January 2013

- Worked on company's Android and backend application teams.
- Android – Focused on diplaying data pulled from backend server and implementing the designer's mockups as XML layouts.
- Backend – Resposible for integration with external services and general bug fixing.
- Utilized Eclipse IDE, Java, Python, Javascript, XML, HTML, Android OS, Mercurial, the Android dev tools, and Google App Engine.

Student Lab Manager September 2008 to November 2010

- Provided basic maintenance on computers and equipment.
- Rented out laptops, headphones, media readers, etc.
- Assisted patrons with technical problems.
- Proposed a new policy to save energy used by lab computers.
- Trained new employees.
- Entered and processed work orders.

Developer Summer 2009 Internship

- Developed a web-based abstract graph viewer for dynamically displaying data gathered
  from competitors' websites for use in tracking trends in page hits and sales.
- Introduced to and utilized Visual Studio, C#, ASP.NET, and Team Foundation Server

COMPUTER SKILLS

Languages:	C/C++, Python, Javascript, HTML/XML, CSS, LaTeX, SQL, BASH/shell-scripting
Software:	NetBeans, Eclipse, Git, Mercurial, SVN, Unix, Linux, Windows, OSX, Android

Class Work

CS442 - Operating Systems and Computer Architecture I Winter 2009-2010

In-depth coverage of computer operating systems and related computer architecture issues. Coverage of physical devices, interrupts, and communication between the computer and external hardware. Interfaces between user programs and the operating system, system calls, software interrupts, and protection issues. Context switching, process address spaces, and process scheduling. Process synchronization, interprocess communications, critical sections, and deadlock detection and recovery. Memory mapping, swapping, paging, and virtual memory.

- Wrote simple shell with support for piping and I/O redirection in C.
- Wrote a basic implementation of malloc, calloc, and realloc in C.

CS458 - Operating Systems and Computer Architecture II Spring 2009-2010

Detailed discussion of virtual memory and backing stores. File system interfaces, implementation, and protection mechanisms. Process scheduling issues, policies, and mechanisms. Interprocess communication between programs on different computers. Distributed systems issues, examples, and implementation.

- Wrote userspace ext2 filesystem driver with built-in cat and ls utilities in C.
- Wrote userspace ELF binary analyzer in C.
- Wrote resource monitoring Linux kernel module in C.

CS512 - Parallel Computing Spring 2010-2011

Studies different parallel structures to familiarize students with the variety of approaches to parallel computing and the strengths and weaknesses of each approach. Concentrates on understanding methods for developing parallel algorithms and analyzing their performance. The advantages and disadvantages of different methods for mapping algorithms onto several different parallel architectures will be studied. Algorithms discussed will include sorting, searching, and matrix operations.

- Wrote parallelized quicksort with pthreads in C.
- Wrote parallelized Mandelbrot fractal image sequence generator with OpenMP in C.

CS444 - Data Communications/Internetworking Spring 2009-2010

In-depth coverage of computer-to-computer and program-to-program communication over modern computer networks focusing on the TCP/IP protocol family. Review of data communication issues, physical address binding, bridging, Ethernet, and Token Ring. Internetwork protocols, routing, domains, networks, and subnetworks. Transport protocols, reliability, flow control, retransmission, and acknowledgement. Distributed systems, server and client issues including verification, and authentication. High-level protocols and applications including electronic mail, network news, remote terminal interaction, and the World Wide Web.

- Wrote userspace IPv6 router in C++.
- Wrote userspace IPv6 host networking stack in C++
- Wrote email forging program in C.

CS456 - Software Design and Development (Senior Capstone) Spring 2009-2010

All phases of the software engineering lifecycle, including system engineering, requirements analysis, design, implementation, and testing. Communication skills that are relevant to working in software engineering teams and interacting with customers. Teams of students perform all software engineering phases in response to the needs of a customer.

- Developed iOS application for Behavioral Migraine Management as part of a small team.
- Learned about and created design specifications and documentation.

CS580 - Artificial Intelligence Fall 2011-2012

This course covers the fundamental underpinnings of Artificial Intelligence (AI), including know ledge representation and search. Predicate calculus, state speace graphs, and heuristic search algorithms are presented. The AI programming languages, LISP and Prolog, are introduced. Current applications and research thrusts in AI are discussed.