
Aaron Myles Landwehr

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Summary

- Experienced in low-level development and optimization.
- Familiarity with parallelizing algorithms for traditional shared memory, non-uniform memory access, and on distributed memory machines.
- Practical knowledge and experience working within teams
- Interested in learning new skills & acquiring new knowledge
- Ability to acquire new skills easily and efficiently

Skills

- Operating Systems: *BSD, Solaris, Linux/Unix, Windows
- Programming: C, C++, C#, Python, Java, Visual Basic, Assembly (RISC)
- Parallel Architectures: GPU(CUDA), Cell, Cyclops64, Blue Gene/P, x86, Runnemedo
- Technologies: POSIX Threads, Java Threads, OpenMP, MPI, OCR
- Project Management: CVS, SVN, HG (Mercurial), Git

Education

University of Delaware, Newark, DE

Spring 2010 – Present

Ph.D. in Electrical and Computer Engineering

- Relevant Courses Taken Include:
 - Computer Networks
 - Sensor and Data Wireless Networks
 - PCB & FPGA Hardware Prototyping
 - Robotic Vision and Animal Behavior
 - Principles of Parallel Computer Architecture
 - Compiler Design
 - Advanced Compiler Design
 - Software Engineering
 - Object Oriented Software Engineering

University of Delaware, Newark, DE

Spring 2006 – 2010

Bachelor of Computer Engineering

- Relevant Courses Taken Include:
 - Object Oriented Programming with Java
 - Operating Systems
 - Data Structures
 - Field Theory
 - Random Signals and Noise
 - Digital Signal Processing
 - Physical Electronics
 - Signals and Communication
 - Electronic Circuit Analysis
 - Analog Circuit Analysis
 - Introduction to VLSI Systems
 - High Performance Computing With commodity Hardware
 - Compiler Design
 - Computer Systems Design I & II
 - Introduction to Computer Systems Engineering
 - Microprocessor Systems
 - Introduction to Digital Systems

Delaware Technical and Community College, Newark, DE

Fall 2005

Accumulated credits toward an associate degree in Electrical Engineering

- Relevant Courses Taken Include:
 - Introduction to Programming
 - DC Circuit Analysis

Elkton High School, Elkton, MD

Completed in June 2005

- Earned High School Diploma.
- Multiple advanced placement courses taken.

Cecil College, North East, MD

Summer 2004

- Courses taken during high school career.

Experience **Research Intern, Lawrence Livermore National Laboratory (LLNL)**

Summer 2014

- Developed parallel molecular dynamics code using the Open Community Runtime (OCR)
- Studied the usability of OCR for certain classes of algorithms and data structures
- Examined and evaluated the constructs provided by various HPC programming models

Research Assistant, Computer Architecture and Parallel Computer Laboratory (CAPSL)

Fall 2010 – Spring 2014

- Self-adaptation and Introspection Research (November 2012-Present)
- Implemented Parallelized LU Decomposition within Concurrent Collections (2012)
- Compiler Development for the Exascale Architectures (Mid 2011 – Early 2012)
- Involved in parallelization of a Turbulent Cloud Coalescence Simulation (– 2010)
- Optimizing FFT for Cyclops64 (Summer 2010)

Research Intern, Computer Architecture and Parallel Computer Laboratory (CAPSL)

December 2007 – 2010

- Involved in the parallelization of a Turbulent Cloud Coalescence Simulation (August 2009 –)
- Co-Developed a Distributed Shared Memory for BG/P using DCMF (May 2009 – August 2009)
- Co-Implemented a parallel FDTD algorithm for Cyclops64 (December 2008 – February 2009)
- Co-Implemented a parallel sorting algorithm for Cyclops64 (June 2008 – August 2008)
- Extensively modified a ray-tracer(Tachyon) for optimal performance on Cyclops64 (December 2007 – February 2008)

Developer for the Miranda-IM Project

Summer 2005 – 2007

- Worked with and analyzed TCP/IP Layer 5 Protocols
- Contributed and worked within a team oriented environment
- Solely Developed the AimOSCAR instant messenger protocol plugin for Miranda-IM
- Modified the AimTOC protocol plugin to support the TOC2 protocol
- Offered coding and debug assistance to other developers within the project
- Offered technical support to users of the Miranda-IM client