

Will McCardell

309 N. Livingston St
Madison, WI 53703

(608) 516-8847
e-mail: wmccardell@wisc.edu

OBJECTIVE

An internship or entry-level software engineering position, preferably in systems or 3D graphics.

EDUCATION

University of Wisconsin – Madison

(Expected December 2010)

- Major: Computer Science, History of Science
- Notable Courses: Computer Graphics, Advanced Graphics, Data Structures, Algorithms, Artificial Intelligence, Operating Systems, Scientific Computing, Networking, Databases, directed study in OS, Video Game Technologies

EXPERIENCE

Condor High Throughput Computing Project

(Feb 2009 – Present)

Software Developer – Flightworthy Team

- Assisted senior developers with maintaining the codebase, and maintained usage-reporting scripts
- Rewrote error reporting on Windows to give less cryptic errors
- Produced production level code
- Profiled existing code, tracked down and eliminated memory leaks
- Wrote a compatibility layer between an old library and a new library

Undergraduate Projects Lab

(Jan 2009 – Present)

Coordinator

- In charge of faculty and staff relations
- Led outreach efforts and organized events, including tutorials
- Miscellaneous administrative duties, including maintaining a lab of 12 Linux computers
- Wrote software to interface with a soda machine, allowing users to buy soda from a computer

DeWitt Ross & Stevens Law Firm

(May 2008 – Jan 2009)

File Destruction Clerk

- Reviewed old legal cases and discarded non-important items
- Created and organized a system for efficiently performing job duties
- Interfaced between my team and lawyers

Noodles & Company

(Aug 2005 – Jan 2008)

Shift Employee

- Worked as cashier, cook, runner, and waiter
- Developed communication skills by working with customers

Will on Call[™]

(2004 – 2008)

- Provide at-home computer repairs to a number of households and a small business
- Set up networking, review crashed computers, install hard drives, general maintenance, and purge viruses

MAJOR PROJECTS

xv6 Kernel and Operating System

- Modified the xv6 kernel and operating system for a directed study course
- Changed scheduling system from round robin to lottery scheduling
- Added various syscalls, including one that checked to see if a block was in the system's buffer cache
- Changed file system so files that are logically near each other are also physically near each other

Soda Machine

- Designed and developed a Java front-end to interact with a database
- Allows users to buy a soda from an adjacent soda machine
- Interacts with the soda machine through a TCP connection
- Set up a database for use by the front-end

Graphics Town

- Created a 3D world which housed a simple town
- Implemented particle systems, billboarding, transparent objects, and shaders

Scene Painter

- Developed software to take a 3D scene, and create a “painted” version of it
- Implemented various ideas from the academic literature of Non-Photorealistic Rendering
- Allowed for the user to switch between multiple different “styles” of rendering

Tutorials

- Administered and coordinated multiple tutorials to students of the Computer Science department
- Topics in the past have included how to use SVN, Makefiles, gdb, and Valgrind
- Gave a short class on the C programming language

RELATED SKILLS**Operating Systems**

- 5+ years experience with Linux
- 12+ years experience with Windows

Programming Languages and Libraries Known

- C/C++, Java
- HTML
- PostgreSQL, JDBC
- bash
- OpenGL and OpenGL Shader Language
- Matlab

Applications

- MS Office, OpenOffice.org
- Matlab
- gdb
- git and SVN
- KcacheGrind, Valgrind, IBM Purify
- Coverity
- Visual Studios 2008
- NetBeans