

Jason A. Wilson

Experience

Intel Santa Clara, CA
Computer Architect and OS Performance Analyst

June 1996 to Present

- Wrote a working set analysis tool for Windows NT (x86, MIPS, and Alpha) and analyzed SYSmark/NT, a business application benchmark suite on these platforms.
- Maintained various computer architecture simulation and analysis tools.
- Performed micro-architecture feature analysis of an unannounced microprocessor.
- Modified a Win32 API capture utility to collect statistics about type usage, call frequency, and call execution time, and then display these in a graphical representation.

HP Labs Palo Alto, CA
Student Intern

Summer 1995

- Ported Sun's Java and HotJava to HP-UX (Unix) and enhanced its networking code.
- Used this port to create an agent operating environment and some simple mail-filtering agents.

Summer 1994, January 1995

Worked on optimizing compilers for super-scalar and VLIW architectures and developed specialized tools to debug such compilers.

- Wrote an intermediate code compiler.
- Wrote and debugged standard and esoteric compiler optimization passes and analyzed performance impacts of these optimizations.

MIT Artificial Intelligence Laboratory Cambridge, MA
Undergraduate Research Assistant

Spring 1994

- Wrote a redundant computation eliminator for a Scheme compiler to move code out of inner loops. This made the resulting code faster on important loops such as string-copy (1/3 faster).

Summer 1993

- Added support for multiple fonts and other GUI features to a text editor written in Scheme.
- Wrote an interface to a Scheme debugger so that it would work from within GNU-Emacs.

- Updated a Scheme compiler back-end to conform to recent enhancements in the RTL for improve floating-point performance.

Spring 1994

- Wrote and debugged a new Scheme compiler back-end that generates ANSI C rather than any particular assembly language. This new compiler correctly handled tail-recursion and other advanced features of Scheme that were only partially handled by earlier efforts to compile into C (for example, Scheme->C).

Summer 1992

- Wrote a new student lab manual for 6.001, Structure and Interpretation of Computer Programs, the introductory undergraduate computer science class at MIT.
- Developed code for use in Problem Sets and help debug the completed problem sets.

Department of Electrical Engineering and Computer Science MIT
6.001 Laboratory Assistant

Fall 1991

- Answered students' questions concerning their programming lab assignments.
- Fixed minor hardware problems and maintained lab software.

Education

Massachusetts Institute of Technology Cambridge, MA

September 1991 - June 1996

- Masters of Electrical Engineering and Computer Science
- Bachelors of Electrical Engineering and Computer Science.

My master's thesis explored the issues in constructing a WYSIWYG HTML editor. To support my ideas, I created working prototypes written in Java. I concentrated on the internal data-structures needed for representing documents compactly but still allowing common operations such as resizing the window or inserting characters to be done "instantaneously" on documents of all sizes. Even with the factor of twenty slow-down caused by the Java byte-code interpreter and the additional constraints of allowing the text to be incrementally modified, my prototype had much better response time than Netscape Navigator.

My course work includes courses in computer architecture, computer languages, computer algorithms, digital systems engineering, analog circuits and systems, operating systems and artificial intelligence.

Interests

Reading, painting, music listening, soccer, skiing, and hiking