

David Dantowitz

www.dantowitz.com

david@dantowitz.com

Cupertino, CA

628-400-2633

Software Development

Seeking a position in software development / research

Tools, algorithms, computation, optimization, refactoring, search, programming language development, stochastic and automated testing, storage optimization, OS internals and computer architecture. Development in C and Objective-C with work in Python and other languages.

Experience

Apple, Cupertino, CA

2/2019-6/2025

Senior Software Engineer, Proactive Intelligence

Designed & developed components of a system for on-device data used as the base of many Apple Software components, including Apple Intelligence's knowledge platform & device personalization across products. Added features, refined and optimized the system as it was adopted by teams at Apple. Worked on several features that are visible to the user, but most are far below the surface. Also wrote tools and developed stochastic testing methods to aid in diagnosing and reproducing bugs.

Rewrote a major component and increased the efficiency of data written and read: storing from 3% to 44% more data in the same size file (dependent on the average size of data elements stored). Rewrote methods to reduce the time to access data. These changes resulted in improvements on all Apple devices.

My latest algorithm research / refactor at the core of another feature resulted in a 7-9 times speed up of a time-critical computation and 13 times less data stored on disk.

Consulting, Millburn, NJ

5/1995-12/2018

Software Development, Tools and Technology Ideas

Designed & developed commercial and internal apps, tools, CD-ROMs, prototypes, games, and web-apps for several Fortune 100 and smaller companies for marketing, education, multimedia and information systems. These included: a multi-threaded database engine for web-based text and location searches (non-exclusively licensed by Apple 2001-2011), custom programming languages & interpreters, a message routing app for Apple's Internet Mail Server, an Apache CGI App gateway, a Content Management System, and prototyping for American Airlines' SABRE System (the initial version of their GUI airline reservation system).

InterActions Media, a division of NCI Advertising / Publicis, New York, NY

9/1998-10/2002

Co-Founder, VP Software Development

Developed and managed 25 projects, peak team size of 10 people. Software, web apps, electronic books, and CD-ROMs for education, marketing, games, contests, surveys, and secure data collection.

Ehrlich Multimedia / Times Mirror Multimedia, Park Ridge, NJ

4/1993-5/1995

Software Developer

Developed Interactive CD-ROM titles and custom tools.

Graphex Imaging Systems, Yonkers, NY

9/1991-4/1993

Software Developer

Developed graphics software & tools, ported C source for a PostScript RIP from Windows to Mac OS & Unix and increased output resolution from 300 to 1200 dpi. Wrote parallel methods in Occam.

Symantec / Peter Norton Product Group, Santa Monica, CA

1/1991-6/1991

Consultant — Developed components and tools for The Norton Desktop for Windows 3, a desktop replacement shell for Microsoft Windows.

Citicorp / Transaction Technology, Inc., Santa Monica, CA

9/1989-2/1991

Consultant — QA group for Automated Teller Machines. In addition to QA, took the initiative to develop a Goal-Seeking programming language & interpreter to model ATMs. The interpreter generated code for a robot that tested ATMs automatically.

Digital Equipment Corporation, Boxborough, MA

6/1985-7/1989

Senior Software Engineer

Developed stochastic testing software for Automated Computer Architecture Verification of CISC and RISC CPUs. Addressed code generation strategies, test value selection methods, Monte Carlo models targeting the accuracy of register file mapping, memory access, handling instruction and memory faults, instruction sequences, execution order, branching, and computation (floating point and integer).

Education**University of California, Los Angeles, CA**

1989-1991

M.S. studies in Computer Science, completed coursework, ABD, GPA: 3.71

Studied Advanced Computer Architecture, Fault Tolerant Computing, and Parallel Simulation.

Research in High Performance Simulation on Shared-Memory Parallel Processors. Created an environment, similar to MPI: a multi-threaded message-based simulation engine for use on a Shared Memory Parallel Super Computer using event driven simulation and minimal synchronization barriers. Member of UCLA's ACM Programming Team for two years.

University of Massachusetts, Amherst, MA

1981-1985

B.S. in Computer Science, Cum Laude, Phi Beta Kappa, GPA 3.92

Dean's list every semester & named an Alumni Scholar (top 60 juniors in a class of 3,914). Operating systems, numerical computation, and computer graphics.

Served as a full-salaried graduate teaching assistant (TA) my last semester for a course on assembly language. Treasurer and Co-Manager of the UMass Chorale, handling two European Summer tours (1982-1984).

Interests

Research with cross-discipline collaboration

A Cappella Music: I have performed on radio, television, film and at Carnegie Hall.