
Objectives

Major software development and leadership responsibilities in the San Diego, CA area.

Experience – Industry

Staff Engineer, Architecture / Camera

Qualcomm – 2017-present

- ▶ Developing software model for camera hardware.
- ▶ Optimizing, automating and improving accuracy of system-level architecture work.

Senior Infrastructure Architect

NVIDIA Corporation – 2015-2017

- ▶ Developed technologies to support graphics processor design.
- ▶ Left because of required relocation.

Principal Software Engineer, CAD Tools

Oracle (formerly Sun Microsystems) – 2009-2014

- ▶ Created efficient software to solve large-data problems for microprocessor designers.
- ▶ Focus: Chip timing analysis, design data model, test infrastructure.

Software Engineer, CAD Tools

Freescale Semiconductor (Motorola) – 1999-2009

- ▶ Contributed to semiconductor design software for timing, characterization, electronic system-level and physical layout.
- ▶ Assisted with porting across APIs, operating systems, architectures and compilers.
- ▶ An architect and developer of company-wide design infrastructure, and several web sites.

Internships

Summers, 1996-1998

- ▶ Responsibilities: image editing software for scoliosis research (Glenrose Rehabilitation Hospital Research Center), multi-platform tool for organizing and distributing information (University of Alberta), infrastructure work such as builds and backups (Intuit Canada Ltd.).
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Experience – Personal Projects

Open-Source Software: “MacTerm” (formerly “MacTelnet”)

1998-present

- ▶ Sophisticated terminal emulation program on macOS / OS X. See: “www.macterm.net”.

iOS and Mac game: “Celtreos” (on App Store)

2013-present

- ▶ High performance, multi-platform code. Created software, artwork, and music.
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Experience – Academic

University Projects

2016, 1997-1999

- ▶ Graduate final project and report (2016): visualization software for RNA folding research (biological science); improved capacity, extensibility, multi-tasking, usability, efficiency, accuracy and testing.
- ▶ Undergraduate team projects (1997-1999): RC car with voice commands, using an FPGA; small self-driving vehicle with sensors, microprocessor; basic Linux kernel programming.

Skills

Coding

- ▶ Accomplished programmer and architect, coding for 25 years. Projects include: a terminal emulator, CAD tools for microprocessor design, scripts, graphics editors, games, and more.
- ▶ Familiar with various concurrency mechanisms, like: Grand Central Dispatch in Objective-C, POSIX threads, and a number of Java libraries.
- ▶ Some experience performing mathematical operations with “learning” libraries: filtering out data, plotting, fitting, computing errors, etc.
- ▶ Basic exposure to PostgreSQL, including writing SQL dynamically through Java.
- ▶ Recent languages used: C++, C, Objective-C, Java, Python, Perl, Unix shells, TCL.
- ▶ Recent APIs used: Cocoa, OpenGL ES, Python numpy/sklearn/etc., POSIX, standard libraries.
- ▶ Recent systems used as development targets: macOS / OS X, iOS, Linux variants, Solaris.

Testing

- ▶ Produced small, specific test programs for projects and tied them into automated test suites.
- ▶ Recent tools used: Python “doctest” and “unittest”, proprietary infrastructures, scripts.

Debugging

- ▶ Work on many code bases has led to experience with several debugging methods and tools, and a tendency to write code that is inherently easier to debug.
- ▶ Recent tools used: “gdb”, Instruments (macOS / OS X), “strace” and “valgrind” (Linux).

Building and Administering

- ▶ Built and installed many tools from source, in a variety of environments.
- ▶ Experience maintaining bug tracker, license servers, web servers, personal software.

Automating

- ▶ Extensive expertise in infrastructure, including: organizing code and data, automating tasks with scripts, and combining basic tools to accomplish a goal.

Documenting

- ▶ Excellent communicator. Strong documentation skills from layman and technical points of view. Software background used for more effective documentation. Adept at “raw” markup.
- ▶ Language/tools experience: HTML, CSS, wikis, Perl POD, Textile, reStructuredText, LaTeX.
- ▶ Top 10% of users on StackOverflow.

Education

MSc. Electrical and Computer Engineering

*Univ. of Texas — Austin, Texas — 2016 GPA: 3.9
Classes: databases, data mining, distributed systems,
multi-core programming and embedded systems,
among others.*

BSc. Computer Engineering

University of Alberta — Edmonton, Canada — 1999