

DARLENE G. WONG

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OBJECTIVE

Software engineering position working with a creative and dynamic team to develop high-quality software.

TECHNICAL SKILLS

- Languages: Python, C/C++, Java, Javascript
- Databases: MySQL, sqlite.
- Revision Control: Subversion, CVS, ClearCase.
- Operating Systems: Mac OSX, Linux, Solaris, and Windows.
- Tools experience: gdb, pdb, make, PyUnit, DejaGnu, cscope.

PROFESSIONAL EXPERIENCE

Software Engineer, NearbyNow

Oct 2007 - Nov 2009

Back-end software engineer for location-based search website and iPhone apps which enable consumers to shop online and put products on hold for pick-up in local stores. Primarily developed using Python.

- *Web Crawling*: Maintained and enhanced crawler for 300 retailer's websites. Managed team of overseas developers: communicated product requirements, provided technical guidance, verified quantity and accuracy of data. Researched and developed solution for scraping data which loads via Javascript. Maintained internal web dashboard tool for monitoring crawler data (CGI & lighttpd).
- *Data Integration*: Wrote scripts to import product data into MySQL database from various sources: crawler feeds, retailer data feeds, and 3rd party iPhone clients. Wrote scripts to import additional data, such as store geocoding information, coupons, retailer images, and mall images. Used Mysqldb and SQLAlchemy (python modules).
- *Data Classification/Normalization*: Wrote internal web tool using TurboGears and Javascript to collect product category data. Used the data gathered as a training set for a classifier to automatically categorize products into normalized categories. Created K-Nearest Neighbors and Naive Bayes classifiers.
- *Image Processing*: Developed library for fetching, scaling, resizing, and storing product images.
- *Search Engine Optimization*: Wrote scripts to generate XML sitemaps for various website products. Worked closely with product manager and director of sales to develop SEO strategy.
- *Data Mining/Analytics*: Processed metrics data to determine the most popular search terms in specific shopping malls, in order to display relevant search suggestions to local users.
- *Test Tools*: Wrote a load testing tool for the ops team to monitor page fetch times. Wrote performance measurement tools to compare MySQL query performance against stored procedures.
- *Testing*: Wrote regression and unit tests to ensure product correctness within unstable development environment.

Software Consultant

Jan 2009 - Present

- Recommended search engine optimization solutions to the Silicon Valley Education Foundation.
- Teaching Assistant for beginner and intermediate Python programming courses taught by Wesley Chun, author of bestselling book *Core Python Programming*. Clients include VMWare and Foothill College. Assisted students with homework assignments and lab exercises.
- Technical reviewer for upcoming edition of *Core Python Programming*.

Software Engineer, Cisco Systems

Feb 2001 - Oct 2007

Software Tools:

- Wrote internal software development tools using Python.
- Enhanced and maintained Cisco and 3rd party tools written in C and Perl.
- Designed and developed tool to analyze compiler, linker, and make errors in order to identify the commits introducing the errors. Significantly reduced amount of time spent manually searching for root causes of errors on multiple branches of Cisco's IOS operating system.
- Designed and implemented features for cscope, an open source C code browser, to incorporate Cisco extensions to ANSI C.
- Developed tools to identify dependencies between C source files and to automate removal of unused header files and their references.
- Led transition to new support case tracking system. Specified feature and interface requirements. Tested features. Provided user interface/usability feedback. Led training sessions prior to deployment.
- Earned Software Tools Bug Hunt Award for finding bugs during beta period and for providing valuable feedback on feature enhancements for case tracking tool.
- Earned Team Achievement Award for building and distributing new version Python on-demand for internal customer.

Networking:

- Resolved customer-found issues in IPv4 and IPv6 DHCP code for external clients, such as NTT, Unisys, Deutsche Telecom, Apple.
- Wrote security enhancements for IPv4 DHCP.
- Configured routers and tested images.

Debuggers:

- Wrote enhancements to GDB to delete all breakpoints on remote routers when disconnecting, and to decompress core files.
- Wrote entire regression test suite for MIPS, PPC, 68K and ARM gdb.

Compilers:

- Built and distributed new compiler for worldwide Cisco engineering development. Modified operating system code as necessary.
- Wrote static analysis tool for analyzing the difference between IOS images built with newer gcc compiler versus older compiler.
- Mentored junior team member.
- Earned Compiler Team Achievement Award for meeting key deadline in migration from gcc-2.95.3 to gcc-3.4.

Software Engineering Intern, Cisco Systems

Summer 2000

- Wrote CGI/Perl web tool for tracking lab equipment reservation requests.
- Wrote Tcl/Tk contact management tool.

Software Development Intern, Hewlett Packard

Summer 1998

- Wrote patch submission tool using CGI/Perl.

Software Engineering Intern, Hewlett Packard

Summer 1997

- Created website using HTML & JavaScript to monitor ANSI C++ compiler performance benchmark tests.

EDUCATION

Santa Clara University

M.S. Computer Engineering

Dec 2009

- Graduated with distinction.
- Master's thesis: "A Tag Aggregation System". Designed and implemented a system for aggregating tag metadata from multiple websites and providing a page recommendation service to users. Developed using Django and sqlite3.
- Coursework included: Information Retrieval and Search Technologies, Pattern Recognition and Data Mining, Unix Network Programming, Internet Architecture and Protocols, Network Design and Analysis

University of California, Los Angeles

B.S. Computer Science & Engineering

Dec 2000

- Senior project: Designed and developed web-based multiplayer Scrabble game with two team members. Wrote client, server, and GUI code using Java. Responsible for game scoring algorithm and multithreaded server architecture.

VOLUNTEER WORK

- *GetSET Summer Week, 2010*: Workshop Assistant at science & engineering camp for high school girls.
- *Dare 2B Digital Conference, 2010*: Lab Assistant for Intro to Python and Google App Engine workshops for 7th to 10th grade girls.
- *Santa Clara University Operations and MIS, 2005*: Tutored in mobile computer lab program, bringing educational technology to local elementary schools.
- *Cisco Women's Technology Action Network, 2004*: Coordinated seminars geared towards women in technology-related fields.
- *Expanding Your Horizons Conference, 2003*: Presented a basic routing workshop at a girls' math and science conference.