Lynn David Newton

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Computing technologist with broad expertise in: Unix (since 1984), GNU/Linux; system testing of operating system and application software; software quality assurance; Perl and shell programming; documentation development; Web application programming; and business processes. Collaborating editor of scientific, forensic, and information assurance documentation. Creator of test and test management software. Author of educational curricula and technical documentation, also non-technical books. Superior verbal communication and presentation skills, with experience in teaching and mentoring.

Technical Skills

Operating Systems   Numerous variants of Unix, including System V Release 2–4, GNU/Linux, Mac OS X, AIX, FreeBSD, Solaris, BSD/OS; also several older operating systems

Programming and Markup Languages   Perl, Unix/Linux shells (`bash`, `ksh`, and `sh`), TeX/LaTeX, HTML/XHTML, CSS, PHP, JavaScript, Python, C, Emacs Lisp, troff/nroff/xroff, Scheme, Forth

Software/Databases/Protocols   Unix command set, MySQL, version control (several methods), VMware, XEmacs/GNU Emacs, many Google Products, Gimp, OpenOffice, FrameMaker, PostgreSQL, WordPress, Plone, Microsoft Office

Miscellaneous   Apache, DBI, CGI, X11, NFS, Bugzilla, Firefox, Chrome, Safari, Internet Explorer, some German language

Work Experience

Neologistics Owner   1978-Present

- Web application developer, deeply experienced in programming Perl and MySQL running on Linux servers with the Apache Web server.

- Freelance Copyeditor.

- Built PostgreSQL database, participated in forensic data analysis for Interhack Corporation.

- Wrote Unix and Linux educational curricula for Cisco Networking Academy Program, used in CNAP's 10,000 academies worldwide.

Interhack Corporation Senior Analyst   2007-2009

- Documentation Editor.

- Defined and published corporate documentation style standards and production processes.

- Collaborated with scientists and other analysts to create peer-reviewed scientific papers, journal articles, and forensic computing and information assurance reports for clients.

- Programmed documentation tools in Perl, e.g., XML parser, LaTeX quality checker, bibliography database search and legacy code search programs.

- Acted as quality assurance lead on software projects: wrote test plans, test cases, assembled test teams, directed testing, reported defects, and created test reports for clients.

- Maintained corporate website, assisted with its migration to Plone CMS, and served as release manager.

Gen Con   Web Application Developer   2006–2007

- Developed convention management software using the LAMP software platform (Linux, Apache, MySQL and Perl).

MontaVista Software   Software QA Engineer   2005–2006

- Programmed Linux kernel test software in Perl, Python, and the Linux shell to run on embedded telecommunications hardware.
- Tested Carrier Grade Edition 4.0, also asynchronous Linux Support Packages for telecommunications boards.

Registration Resources   Web Application Developer   2002–2004

- Lead developer of Perl and MySQL based RegPro, the company's principal software product, a client-modifiable system for managing conventions, events, training, and membership registrations.
- Designed RegPro extension modules, including Hotel, an accommodations reservations package for convention level events.

University of Advancing Technology   Senior Instructor   2002

- Taught beginning and advanced Unix and Linux.

Motorola Computer Group   Staff Software Engineer   1987–2001

- Created Test Case Matrix application in Perl, MySQL, Linux and Apache, to standardize test planning, tracking, and reporting, resulting in time savings of 75% over previous method.
- Created Automated Controller for Test Suites (ACTS), a domain-specific programming language, along with over 1,500 test scripts for the System V Release 4 Unix command set. ACTS enabled unattended running of tests in 48 hours that would have taken months by hand, resulting in productive detection of product defects.
- Wrote and typeset the *ACTS Programmer's Guide.*
- Wrote a paper about ACTS that was selected for oral presentation at a Motorola Technical Ladder Conference, giving the application company-wide exposure as an effective testing tool.
- Built and maintained Perl-based System Test Library, a collection of test and tools software, process and project documents, and work objects, which played a primary role in System Test becoming the second group in the company to earn SEI level two accreditation.
- Led AIX compliance and POSIX testing on PowerPC platform products, and served as liaison between MCG and IBM compliance teams, resulting in MCG PowerPC system Products earning AIX and POSIX accreditation.
- Programmed thousands of test and utility scripts in Unix and Linux shells.
- Completed eight-week Motorola Software Engineering Training Program, resulting in certification as a Motorola Software Engineer.

Four Phase Systems   Senior Software/QA Engineer   1983–1987

- System tested software and hardware products prior to release, resulting in many fewer product defects being delivered to customers.
- Beta tested third party applications and documentation, resulting in their being brought up to marketing standards.

Career Development

- Presenting Data and Information (Edward Tufte)
- Embedded System Development Using MontaVista Linux
- Perl, Advanced Perl
- C Programming (several courses)
- AIX System Administration and Use
- Software Testing (several courses)
- Configuration Management Version Control (CMVC on AIX)

- Capability Maturity Model (SEI)
- Motorola SRD Software Engineer
- LynxOS RTOS
- FrameMaker
- Chorus RTOS API
- Scheme Programming
- CompactPCI High Availability Architecture and Hot Swap Technology
- PowerPC Hardware System Troubleshooting

Education

- Master of Music program in music composition, University of Illinois, Urbana, Illinois
- Bachelor of Music, University of Illinois, Urbana, Illinois
- Bearns Prize in Music, Columbia University
- Several fellowships, scholarships, and awards

Miscellaneous

- Member of T$_{\!E}$X Users Group (TUG)
- Long-time runner, organizer of marathons, ultramarathons, and multi-day races, writer on running.
- Lifetime musician, member of ASCAP (American Society of Composers, Authors, and Publishers)