Colin Coghill

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I love being given a difficult technical problem, good tools (Linux, Python) to solve it, and a deadline to keep things exciting.

I feel that usability and security are both vastly under-appreciated in modern applications, and that by building and promoting open systems (source, standards, whatever) we can make awesomeness really start to happen!

Technical Skills

Like: linux, python, c, open-source, secondlife

Dislike: microsoft, cobol, windows, oracle

Experience

Senior IT Applications Specialist – The University of Auckland   *June 2011 - Current*
python, django, php, postgresql, javascript, linux, apache

Leading a small team of web developers. Setting up our development processes and tools. Everything from configuring the dev/stage/production environment to database schema design, security audit, and introducing coding practices, version control, testing.

Working with the operations team on integration with their systems, including moving our applications to use centralized databases, authentication, monitoring, etc.

I'm currently moving the team from PHP to Django, and working with them to modularize things and to try and improve efficiency and quality.

Senior Tutor – The University of Auckland   *2000 - Current*
linux, c, c++, python, bash, gcc, java, tcl, tk

Designing and teaching programming courses and related topics to engineering students. Mostly at the undergraduate level, but I co-supervise a PhD, and have assisted with postgraduate courses.

In July 2011, this role dropped to 20% of my time, but I continue to teach programming in Python and C++ to engineering undergraduates.

I've taught various aspects of Software Engineering (Agile, XP, Project work), and several programming languages (C, Tcl/Tk, Python, C++). My focus has usually been on project work and the more practical sides of software development.

Being at a large Engineering department, I've been closely involved with a wide range of student projects including hardware, networking, security, social networking, parallel computing, wireless, cryptography, and more.

Software Developer – The University of Auckland   *1998 - 2000*
linux, parallel-processing, networking

I was hired to investigate and install Linux for the Department of Electrical and Electronic Engineering. I designed and built a networked system where the desktops synchronize and repair their file-systems when they boot, allowing us to have a very low-maintenance way of running Linux on approximately 300 desktops. This system, "Remote Linux", was successful and is still in use as of 2013.

Later, I assisted with the design and set up of Linux based compute clusters for the teaching of parallel programming.

Systems Administrator – Netbyte Internet Ltd   *1997 - 1998*
linux, sunos, netscape, perl, cgi, windowsnt, javascript, sendmail, cisco, tcpip

Typical small ISP systems administration work. Keeping the web servers running and doing the occasional bit of system programming to tie things together, monitoring, etc. Configuring routers, DNS, setting up downstream ISDN and Frame Relay connections. Assisting business customers with performance, security, and other network issues.

Internet Security Consultant – Extranet   *1996 - 1997*
borderware-firewall, openbsd, rsa

Consulted to companies with internet connections and investigated their security, recommended security products and helped install them. Firewalls, sniffers, filters, etc. Performed penetration testing, when required.

Systems Administrator – UR-Online   *1994*

linux, perl, nn, usenet, hayes

Designed, built, and ran the systems of a small dialup ISP from scratch.

Email, usenet servers, Modem banks, Frame Relay, ISDN, Windows 3.1 dialers, etc.

Education

Bachelor of Science (Computer Science) – The University of Auckland   *1991 - 1996*

Minored in Maths and Philosophy.

Got a couple of lines of code into the Linux kernel that lasted for two whole development revisions.

Winner (team of 3) of the ACM NZ Programming Contest, 1991.

Masters in Engineering (Software Engineering) – The University of Auckland   *2007 - 2008*

1st class honours.

"Revisiting HTTP Client Side Includes"

Involved using Java-script to improve the performance of web applications by breaking the pages into fragments and reassembling them in the browser.

Projects & Interests

Oasis Assessment System – http://www.ece.auckland.ac.nz/oasis

python, postgresql, couchdb, nginx, javascript

Web application to assist students in practicing coursework type problems.

Lead programmer, designer, sys-admin.

GitHub - oasisqe – https://github.com/colincoghill/oasisqe   *April 2013 - May 2013*

javascript, python, web

OASIS Question Engine

Primary Developer