CURRICULUM VITAE

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SUMMARY

Development, debugging and automated testing in Python/Django with pytest, Java (jUnit), C# (nUnit) and JavaScript (Protractor and Karma). Additional experience in shell scripting and Vala.
Linux systems administrator experience, involving networking, technical & clerical office IT, also hosted web server operations, maintenance & remote access.
Background in engineering and numerical analysis.

EMPLOYMENT HISTORY

August 2016 – Present, (iotec, Plymouth)

Selenium testing of Django appications, including py.test fixtures and headless browsers. Python programming against JIRA and Github APIs as part of developing a continuous delivery pipeline. Pycharm IDE, developing and debugging against multiple local and remote virtual environments on MacOS and Ubuntu AWS instances.

December 2014 – June 2016, (The Learning Clinic, Exeter)

Primarily AngularJS/Protractor web UI testing, along with some Typescript/C# development and bug fixing.

May 2013 – December 2014 (Personal projects)

Physics (mostly Special and General Relativity) simulations and visualizations in Java, Python and Vala. https://github.com/m4r35n357

May 2013 – April 2014 (IDSI UK Ltd., Plymouth)

Development of Java software for collection, processing and display of oil well production logging data. Modelling, calibration and temperature compensation of instrument sensors. Eclipse RCP/EMF environment with Git source control and Rake/Maven build.

(self-training . . .) , then October 2012 – April 2013 (Social 360 Ltd., Okehampton)

Django/Python web development and scraping for internal operational interfaces, with JavaScript/CSS/XPath, using a MySQL backend, under Mercurial source control. Linux/Ubuntu server administration (remote backups/file transfers, real and and proxy server setup).

December 2007 – September 2010 (Goss Interactive Ltd., Plymouth)

Client & Server-side Java (versions 1.4.2 and 6) development for a commercial web content management system (iCM). Eclipse IDE, Junit/Easymock testing, Subversion source control, Maven build environment, Hudson continuous integration. Design and implementation of Hibernate persistence for a Mule network agent. Maintenance of a Solr/Lucene-based search library. Development of additional components for the main CMS product.

(self-training . . .) , then May 2006 - July 2007 (Phosphorix Ltd., Exeter)

J2EE development for educational sector – web portal and custom networking applications. Struts/Spring/Hibernate, Eclipse, Tomcat. Linux/FreeBSD systems administration, VPN/VNC teleworking environment, emulators - Tomcat clustering/HA, remote backups.

September 2004 - October 2005 (Digital Creations Ltd., Abbotskerswell)

Software development, mostly in support of vehicle telematics systems and GPS/GPRS subcomponents. Target hardware platforms included PCs, PDAs (C# with Visual Studio and SharpDevelop IDEs on the .NET Compact Framework platform) and mobile phones (Java with Eclipse IDE on the J2ME platform), for client (via GPRS) access to Web Services.

May 2004 - August 2004 (Titan Computing Ltd., Torquay)

Computer fault diagnosis and repair. Network maintenance, servers, ADSL, wireless.

August 2003 - January 2004 (Saltstone Media Ltd., Kingsbridge)

Systems Administration of web development environment. Supervision, maintenance and repair of commercial Linux/Apache/MySQL/PHP web servers (9 in all) and email/DNS servers, as well as an internal network of around 20 office machines running a mix of Windows 98/2000/XP, Mac 9/OSX and Linux.

October 1999 - May 2002 (Syn-Apps-Sys Ltd., Abbotskerswell)

Continued previous testing work for the Nortel Internet FWA upgrade until the end of April 2002, when the product was withdrawn from the market and the project wound up.

System administration and IT support for a mixed network (100+ nodes) of Windows/Linux PCs and Solaris/HPUX workstations, plus a number of additional network devices (including test equipment, printers, routers, WEB appliances, modems). Specific achievements include:

- Installation and performance tuning of main Linux server, desktop workstations and dedicated test machines.
- Scheduled network backups of critical machines to tape, with off-site storage. Key technologies: firewall, remote dial-in access, SMTP/POP3 email, news server, VNC, SSH, NIS/NFS, DNS, Samba, Apache, shell, tcl/Tk, C.
- I specified and procured the desktop machines as well as the main server, which provided centralised home directories for Windows users and network logons via SMB, as well as Unix sessions for all via VNC.
- I partitioned the disks, located drivers for the RAID hardware, configured and compiled the OS kernel (including raising various resource limits as appropriate for server deployment) and installed all software on the server.
- The main server provided caching DNS, routing, scheduled email collection using POP3, and outgoing email via SMTP. Other key machines provided newsgroup access, server-side scripting, and SQL databases.
- I also administered NIS on the Solaris server, which was used mainly for software development.
- Key machines were updated regularly for security fixes and we filtered incoming email for viruses and other malicious attachments.

October 1994 - September 1999 (Nortel Fixed Wireless Access, Paignton)

Systems Integration and Test for Nortel's Proximity fixed wireless access (FWA) telephony products.

- Complex software integration, problem reporting, working with various development teams, and testing under a regime including many different releases and variants of system software and hardware.
- Development of a test system configuration framework using a unix shell interface to existing test tools, writing test specifications, developing a test automation system using shell, tcl/Tk & expect.
- Test case design, implementation and control. operating, installing and maintaining Unix like systems, basic TCP/IP and PPP network setup, subnetting and routing.

April 1990 - September 1994 (BT Laboratories, Martlesham Heath)

Radio-fibre systems and devices specialist, interworking with various optical device development programmes. Consultancy to BT's operating divisions, concerning application of radio-fibre systems to cellular networks and satellite earth stations. Development of spreadsheet tools for detailed performance and cost modelling of complex radio fibre systems. **US Patent 5,777,771**

Jan. 1989 - Mar. 1990 (Thorn EMI Central Research Laboratories, Hayes)

- Technology transfer work, concerning the theory behind a custom analogue silicon IC hysteresis controller for switched mode power supplies. The chip was designed to perform power factor correction for incandescent lamp installations.
- GaAs MMIC design (using the Plessey F1a & F20 processes), and simulation of microwave mixer circuits, using my own harmonic balance software as well as commercial linear and nonlinear circuit simulators. Extensive use of Pascal on MicroVAX/VMS minicomputers.
- Dynamic modelling of GaAs MESFETs for mixer applications using harmonic power measurements (presented at an IEE colloquium).

EDUCATION

Oct. '82 to Dec. '88 (University of Leeds)

PhD Thesis - Wideband Microwave Mixers.

- Study of wideband microwave mixers, coding and development of various novel harmonic balance algorithms, including methods for their improvement.
- Use of Pascal on VAX, Amdahl and Prime mainframes.
- Design, simulation, layout and measurement of a Gallium Arsenide MMIC distributed mixer using the Plessey F1(a) MESFET processes.

BSc Honours Class II(i) in Electrical and Electronic Engineering

- Final year project: Direct Broadcasting by Satellite

1979-1981 (King Charles I School, Kidderminster, Worcs.)

4 GCE A Levels: Physics (A), Chemistry (A), Mathematics (C), General Studies(B)

1974-1979 (Royal Wolverhampton School, Wolverhampton, W. Mids.) 9 GCE O Levels