Resume of Richard T Jones

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Education

1997	Oracle 7 Fundamentals (Sequel)
1997	Oracle 7 Administration (Oracle)
1996	Basic and Advanced Java programming (Sun)
1994	Introductory Meteorology (Bureau of Meteorology)
1993	Bachelor of Computing (Digital Technology) with Honors (Monash University)
1989	Victorian Certificate of Education

Other Qualifications / Awards / Activities

2006	Invited to participate in the Python 2.5 optimisation "Need For Speed" development sprint in Reykjavik, Iceland.
2005-2009	Ran and competed in the pyweek.org game programming competitions. Won first place, individual entry, in PyWeek 3. Won third place, team entry, in PyWeeks 1 and 4.
2005, 2006	Programme Chair for the Open Source Developers' Conference. I continue to be on the OSDC executive committee.
2005, 2006	Organised and participated in Python Package Index (PyPI) sprints at PyCon and EuroPython.
2003, 2004	Participated in Zope 3 development sprints.
2002-2004	Completed three 48-hour game programming competitions. I also organised the last two.
2001	NaNoWriMo winner (50,000 word novel written in one month)
1998	Oracle Certified Professional

Work History

Oct 2007-present:	ekit.com Inc (http://www.ekit.com/) Senior Developer creating and maintaining customer and internal web sites and telecommunications systems in a team of 9 using Python, Zope, Twisted, TurboGears, PHP and C. Systems included the complex customer-facing website, an internal customer-service web interface, SMS message generation, transmission and handling, phone call handling systems and a variety of ancillary systems and support libraries. Also devised and ran usability tests.
April 2007-Oct 2007:	Bluebox Devices (http://www.blueboxdevices.com/) Lead OpenGL developer tasked with creating Bluebox's digital media user interface. This included liaison with the user interface design team and back-end systems programmers. The software is predominantly written using Python with some C (and a lot of interfacing of Python with C libraries).
2007-present:	RMIT University Sessional position lecturing Python as part of the School of Computer Science and Information Technology. Responsible for developing and presenting the lectures as well as setting assignments, tutorials and examination questions.

2002-2007: Common Ground Publishing (http://www.commonground.com.au/)
Senior Developer creating and maintaining a complex online content management and conferencing system in a team of 1-4 using Python, Zope and a little C and XSLT. Also largely responsible for IT infrastructure.

2001-2002: ekit.com Inc (http://www.ekit.com/)
Senior Developer creating and maintaining a complex web and backend support system in a team of 3-4 using Python and C.

2000-2001: Bizar Software Pty Ltd (http://www.bizarsoftware.com.au/)
Senior Developer role writing online shop software in a team of 2-3 using Python, C and Zope.

1999-2000: Fulcrum Consulting Group
Developer and then Senior Developer role writing internal business and software development systems in a team of 4-5 using Perl and Java. Also performed project and line management roles.

1994-1998: Bureau of Meteorology
6 months in a position as a System Administrator doing Unix system administration with a little C coding. 12 months in a Development role coding system administration tools using C. 3 years as a Senior Developer, coding C in several projects ranging in length from 3 months to 2 years (with a smattering of Python). The final two-year archiving project was entirely mine to manage and develop.

Technology Experience

Python

Extensive experience with Python, beginning with hobby use since University and going on through my employment with Bizar Software, ekit.com, Bluebox Devices and Common Ground. I am also active in the Python community, having developed several packages (eg. the Roundup issue tracker) and the Python Package Index (http://pypi.python.org/ as specified in PEPs 243, 301, 314, 345). The systems I've worked on include:

- website functionality including commerce, sql back-end, image processing, user management, blogging, third-party access APIs across multiple web frameworks
- several PyQt-based applications, such as an ogg/mp3 player and home finance organiser
- several games and technology demonstrations using PyGame, PyOpenGL and PyODE
- credit card transaction system (several networked Unix daemons)
- sms message routing and SMPP ESME/SMSC daemon using Twisted
- reliable message passing system connecting ekit's London and LA POPs
- Unix daemon creation and management
- email interface systems for sending and receiving email and performing a variety of tasks (encoding and decoding / processing) in both cases
- SIP system for querying mobile phones
- report generation tools
- web unit testing tool with web-browser-like functions, DOM extraction and unittest-like functionality
- several open source projects (see below)

- Zope support code for Bizar Software, ekit.com and Common Ground
- the "pyglet" multimedia and game engine project

I participated (by invitation) in the 2006 Python 2.5 optimisation "Need For Speed" development sprint held in Reykjavik, Iceland. During the sprint I re-wrote Python's base exception classes to gain a 30% speedup.

I have attended and presented at several conferences including US PyCon and EuroPython. I have been program chair for the Open Source Developers' Conference which has a strong Python track.

I have a recipe in the 1st Edition "Python Cookbook" and was asked to perform Technical Review during writing of the book "Beginning Game Development with Python and PyGame" by Will McGugan.

Web Framework, HTML, PHP, CSS and Javascript

I have experience working with various web technologies and Python web frameworks.

I have been responsible for the creation of HTML pages, CSS stylesheets and Javascript code. I have worked on:

- utilising Zope, Django, Pylons, Twisted and TurboGears as appropriate
- ground-up development of http://www.cgpublisher.com/ online conference and publication environment (including a Javascript-based online program calendar editor for conferences)
- ground-up development of online store software (Bizar Shop) targeted at box-on-shelf distribution
- many back-end (call centre, system daemon and other intranet) and front-end (customer-visible) interfaces at ekit.com
- dev -> beta -> test -> production release and monitoring system
- patches and bug fixes for Zope itself
- Zope installation GUIs and systems for Windows, MacOS X and Linux
- call profile analysis tool (CallProfiler) and other Zope optimisation techniques
- Zope interface Products for reStructuredText and Roundup
- Several small websites using PHP, including code to access 3rd-party sites using POST HTTP requests (where curl was not an option)

OpenGL

I used OpenGL while at Bluebox Devices to create 2D and 3D user interface components for their media product. This was developed using Python but at an API level almost identical to C in places (higher-level abstractions were used when appropriate).

I am a contributor to the "pyglet" multimedia library project which combines OpenGL, platform-specific windowing and user interaction, multimedia components, text rendering (platform-system specific and freetype) and more. During my time at Bluebox I developed a GUI toolkit for pyglet called "wydget". During the development of pyglet I developed several tech demos (some small games, others just demonstrations of aspects of OpenGL like shader programming, blending models, etc.)

I have used OpenGL in numerous games developed as a hobby.

C / C++

During the Need For Speed sprint in Iceland I made modifications to the C Python interpreter code.

I used C extensively at the Bureau and Bizar Software. The largest project I worked on catalogued the Bureau's satellite imagery and presented the meta-data to an international, interoperable network called organised by the EOS "EOSDIS" project at NASA. This project included collaboration on the development of new Australian standards for satellite data archives with the CSIRO. The resulting archive is accessed through:

http://www.bom.gov.au/climate/satellite/archive/

At Bizar Software I developed a GUI (Carbon) Control Panel for Zope that gave novice users control over the Zope server process.

I have also developed several C-based Python extension modules, including a code obfuscation system for Bizar Software and several OpenGL helper modules for private projects.

I have not used C++ in any significant capacity since I learnt it, though with my strong C and object-oriented experience I feel confident that I can get back up to speed quickly.

Java

I used Java for 9 months to develop complex front ends for the Contacts, Ordering and Invoicing systems at Fulcrum. They used the Swing GUI toolkit and communicated via a customised XML-RPC interface to a Perl/CGI back end which held business logic and database interfaces.

Perl

Used at Fulcrum developing large applications, mostly with CGI front ends. The work included:

- mapping of Fulcrum's business systems as software components and the entry of same into documentation system
- database and object design and coding of Perl modules for Project Management, Human Resource, Contacts, Ordering and Invoicing, Task Management and several other smaller components
- automatic generation of SQL schemas, Perl modules, Java source and E-R diagrams from the documentation system
- web-based software development documentation system

Sybase, Oracle, sqlite, gadfly, MySQL, PostgreSQL

I have used SQL in most of my jobs and am confident in its use across all of the databases listed. I have done Oracle DBA courses and was an Oracle Certified Professional. I rate myself as pretty good at DB design and competent with SQL.

Mac OS X

I have experience developing for the OS X platform using Carbon in both C and Python whilst at Bluebox Devices and Bizar Software. I have also been using OS X during my time at Common Ground - the CGPublisher platform runs on both Linux and OS X. Incidentally my Open Source projects are all also cross-platform and I generally work on either Linux or OS X. I use OS X as my primary desktop (laptop) environment.

Unix

I have written many systems that reside in a Unix environment (HPUX, SunOS, Solaris, Unicos, DGUX, Linux, and others I'm sure). I am quite comfortable working in that environment. I know enough to keep my home Linux systems running.

Open-Source Project Experience

These are open source projects that I lead or co-develop:

PyWeek Game Programming Challenge - http://www.pyweek.org/

> PyWeek is a game programming challenge that I initiated and continue to run. Entrants must write a game in a week using Python.

Pyglet - http://code.google.com/p/pyglet/

> Package for 2D and 3D games programming on Linux, Mac OS X and Windows. Developed to use native libraries only through ctypes. Alex Holkner is the lead developer of this project.

Roundup – http://www.roundup-tracker.org/

> Roundup is a simple-to-use and -install issue-tracking system with command-line, web and e-mail interfaces. I initiated this project in 2001 and continue as the lead developer.

Bruce The Presentation Tool - http://bruce.python-hosting.com/

> I wrote Bruce the Presentation Tool for Python programmers who are tired of fighting with presentation tools.

PyPI - http://www.python.org/pypi

> The Python Package Index is the an attempt to create a comprehensive catalog of third-party Python packages. The catalog is integrated with Python's distutils and the registration interface is built into Python 2.3. Relevant PEPs are 243, 301, 314 and 345.

Python Task Planner - http://www.mechanicalcat.net/tech/pytaskplan/

> A simple task planner capable of resource allocation (including one-of-many), milestones, interruptions (holidays, etc), HTML plan generation and HTML gantt chart generation.

Web Unit Testing Tool - http://www.mechanicalcat.net/tech/webunit/

> Unit test websites with code that acts like a web browser.

Game Programming Experience

I have developed games using Python with both the PyGame (based on the Simple Directmedia Layer library) and OpenGL libraries. Games that I have written or been in the team writing include:

Bouncy the Hungry Rabbit - http://www.pyweek.org/e/bouncy/

> "Bouncy", a 3D arcade game using OpenGL, came first in the individual rankings for the third PyWeek. I wrote all of the code and created the 3D models for the game in the week of the challenge.

Flat Bot- http://pyweek.org/e/flatbot/

> "Flat Bot" is a 2D arcade game using OpenGL and graphics I created in Inkscape. This was also a solo entry.

Threads of Fate - http://pyggy.pyweek.org/e/threads/

> "Threads of Fate" is a 2D strategy role-playing game using OpenGL. I wrote almost all of the code and created most of the in-game artwork.

Evolution - http://www.pyweek.org/e/f-m/

> "Evolution", a 2D arcade game using OpenGL came third in the team rankings of the fourth PyWeek. It was based around the concept of a character that mutated to suit conditions in the game (growing fins when in water, growing wings after jumping

enough, etc.). The landscape was partially randomised and formed using bézier curves. The team consisted of myself doing all the programming, an artist and a musician.

POWER CORE - http://mechanicalcat.net/tech/PyWeek/1/entrants/Uberteam

POWER CORE is a 3D OpenGL arcade game that's about you fighting off invading hordes of UFOs intent on blowing up your POWER COREs. This game came third in the team rankings during the first PyWeek. I was the main programmer, with two others doing the modeling and a fourth occasional programmer.

Steam of the Colossus - http://www.pyweek.org/e/richard/

Quite a simple game that I spent about 25 hours on during the second PyWeek.

Ghosts - http://www.mechanicalcat.net/tech/ld48/6/rj

An LD48 entry working with the theme of "light and dark".

Ducks - http://www.mechanicalcat.net/tech/ld48/home/richard

An LD48 entry working with the theme of "random".