

Oisín Mulvihill - Curriculum Vitae

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An entrepreneurial, passionate and creative developer with more than 10 years Python development experience. A strong believer in delivering high quality solutions, through Test Driven Development (TDD) and using the Agile (Extreme Programming) methodology.

Major Achievements:

- Designed a distributed application framework used in automated ticket purchase & collection systems throughout Norway and the UK.
- Designed the first prepaid Internet kiosk solution in Ireland.
- Rapid development & deployment of a top up system used to credit prepaid phone cards.

Recent Professional Experience:

June 2011 – Current, Senior Developer, PythonPro Limited (Contract):

Working with web and mobile technologies to build a prototype social service for investors.

Technologies used: Python2.7, JQuery, HTML5, CSS, PostgreSQL & Redis.

August 2010 – June 2011, Senior Analyst, NYSE Euronext (Contract):

Working with Django / Python2.4 to develop & extend a configuration management system (CMT). This stores & administers set up for the Trading systems. Extensive use of HTML/CSS/Javascript/JQuery to generate web based interfaces for XML/YAML/Configuration data manipulation.

Introduced Selenium to functional test CMT. Increased and formalised unit test coverage with nose. Introduced a common development environment built on Paver, Virtualenv and bash. This allows faster development, building and releases of CMT. Interfaced testing with Electric Commander.

Worked with NYSE Trading host to test its FIX version 5.0 SP2 implementation using Python2.7, cxOracle and Oracle.

August 2006 – August 2010, Lead Developer, Newman Online Limited, England:

Choosing the Turbogears framework, I developed the web sales platform used to sell tickets throughout the UK and Norway. This platform could be customised using a plug-in system. The base site designs I converted to KID templates for XHTML generation along main CSS styles. The templates, Javascript and CSS could be over-ridden in alternative themes to present very different views.

I designed and developed an automated ticket collection and purchase system. This was a further extension to the plug-in system. It added hardware abstraction with messaging using the STOMP protocol and ActiveMQ. The automated ticket purchase used the same payment code as the website. I overrode the CSS/XHTML templates to implement layouts more in line with purchase

and ticket collection. I also had to develop drivers for the system. For example payment protocol over TCP/IP to interface to Norwegian chip and pin systems.

I also developed Newman's "print-at-home" system, similar to those used in Airports. This was based around ticket booking references which were encoded as Aztec bar codes. I used Python and Ghostscript for the generation task. Email confirmations would contain image links to a Turbogears web service. This generated and cached the Aztec images displayed in emails.

I championed the introduction of Test Driven Development (TDD) and the adoption of some of the principles of Agile Development. The testing and test data generation system I developed, greatly increased the code quality and system flexibility.

Technologies used: Python2.4/2.6, Kid, Django, CherryPy, Twisted, Pylons, Turbogears, Javascript (jQuery & YUI), XUL, XHTML/HTML/HTML5, XML, CSS, C++, SQLServer2k5/2k8, PostgreSQL, Bzr, Svn, Debian, Ubuntu, Citrix Xen, Windows 2k3-2k8, MacOSX, TCP/IP, Apache, Trac.

May 2009 – February 2010 – Consultant, Flight Data Services, England:

I designed & developed a prototype web application allowing experts to analyse black box data. I introduced the Agile Development methodology to manage change efficiently. The test driven aspect of this involved using Python's "unittest" and "nose" to create test cases verifying the low level API. The web based front-end was verified using Selenium Remote Control.

I used Mako templates to generate XHTML after designing a basic look for the site. I built upon the inheritance Mako offers to have a base template for the site wide design. I was then able to make page specific templates that would generate XHTML to fit into the base design. I used Javascript and YUI's Grid widget to present paged flight data. I extended the data display widgets to use deferred loading via AJAX to filter and search the data sets.

Technologies used: Python, Mako, Pylons, Javascript (jQuery & YUI), XHTML, CSS, PostgreSQL, Bzr, Debian & Apache.

August 2004 – August 2006, Web Developer, The pH Group, England:

I developed web based financial analysis programs for most of the major banks in England. I made extensive use of AJAX/COMET via the Mochikit/Nevow's Livepage technology. I developed the web base programs in Python using the Twisted/Nevow or CherryPy web application frameworks. All data is stored in Oracle and accessed from Python via PL/SQL or direct queries with cxOracle.

I introduced web application development using Twisted & Nevow to replace Mod-Python. This has allowed web applications to be developed more rapidly and in a maintainable fashion. This also allows applications to be developed and deployed on both Linux and Windows based systems.

I've introduced modern software development practices such as source control, changed management, issue tracking, unit testing and acceptance testing. These did not exist prior to my arrival at this company.

Technologies used: Python, Nevow, Cherrypy, Twisted, Javascript, Mochikit, XHTML, CSS, MySQL, Oracle, Svn, CVS, Debian, Gentoo, Windows 2k & Apache.

November 2003 – August 2004, Consultant, Westglobal, Ireland:

I provided consultation for modern development methodologies, including eXtreme Programming (XP) and test driven development.

I was responsible for the design and implementation of an Python based acceptance testing framework for Westglobal's main Java based product "mScape". This allowed simple scripts to be written which implement the user acceptance stories. The systems ran on Linux and HP-UX.

Technologies used: Python, SimpleTAL, XML, Java, Hibernate.

May 2002 – August 2009, Developer/Director, Engines Of Creation Limited, Ireland:

Using Python and Test Driven Development, I designed, developed and delivered the following products for my own company. These products required Linux, Mac and Windows experience.

- Scratch Card Prepay Internet Kiosk System: Irelands first prepay card internet kiosk system.
- Telephone Call Card Software: This contract produced a program capable creating and tracking prepaid call card top ups. It interfaced to a major telco's system to perform the card top-ups.
- Internet Cafe Management Software: I developed software with two others to record the usage of PC machines in a cafe an associate was running.

Technologies used: Python, Nevow, Zope, TAL, Twisted, pyGTK, GTK, RPM, Javascript, XHTML, CSS, MySQL, Svn, CVS, Fedora Code Linux & Apache.

Open Source Experience: I am the developer on the following projects:

- Stomper (<http://pypi.python.org/pypi/stomper>)
- ServiceStation (<http://www.pythonpro.co.uk/servicestation/wiki>)

Interest & Hobbies: Hiking, Scrambling, Photography (<http://www.flickr.com/oisinmulvihill>), Caving, Rock Climbing and anything that gets me outside really.