

Details

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<http://rayh.com.au>

Latest CV

<http://rayh.com.au/RayHiltonCV.pdf>

Experience Summary

7 years	Java, J2EE, Applets
8 years	Javascript, CSS2, (X)HTML, "AJAX", "Web2.0"
5 years	XML, XSLT, XPath
4 years	Ruby, Rails
3 years	Agile, Lean, BDD, TDD

Role

Senior Java Developer & Software Architect

Specializing in using Java with innovative technologies (Peer to Peer, audio/video streaming and processing), distributed systems (for high scalability, MapReduce, GridGain, Terracotta, JBossCache, Infinispan, etc), search technologies (Lucene, Ferret, Nutch, Hadoop) and NLP/AI technologies.

Very adept with Agile processes, modelling with UML2 and has a good grasp of Design Patterns.

Familiar with common UNIX variants (Linux, Solaris, BSD, Mac OSX) and Windows (inc. .NET). Also much experience with XML, XSLT and associated technologies.

Education

Upper 2nd Class B.Sc. (Hons) Computing

2004 to 2008 - Open University, Walton Hall, Milton Keynes, MK7 6AA, UK

3 A Levels (Mathematics, Physics and Chemistry)

1994 to 1996 - Dartford Grammar School, Shepherds Lane, Dartford, Kent.

8 GCSEs A-C including Mathematics and English

1989 to 1994 - Dartford Grammar School, Shepherds Lane, Dartford, Kent.

Technologies

Persistence frameworks

JDBC, db4o, Hibernate, TopLink, Torque, Creole, Propel, ActiveRecord

Application frameworks

Guice, Spring (Java)

Web frameworks

Spring MVC, Struts, Wicket, DWR, Symphony, Zend Framework, Ruby on Rails, Sinatra

Javascript frameworks

jQuery, Prototype

Storage Servers & Databases

Oracle, MySQL, PostgreSQL, MongoDB, CouchDB

UI technologies

HTML5, Canvas, XUL, XULRunner, XPCConnect, XPCOM, Swing, Interface Builder

Media technologies

Processing, Java Sound, JOGL, JDIC

Web & Application servers

Websphere, GlassFish, Apache HTTPD, Apache Tomcat, Phusion Passenger

JMS messaging servers

Tibco, Aqualogic

Build & monitoring tools

Ant, Ivy, Maven2, Rake, Capistrano, God, Monit, Phing

Testing tools

JUnit, TestNG, Mockito, EasyMock

Web services

JAX-WS (Apache Jersey, JBoss RESTEasy), JAX-WS (Apache CXF)

XML tools & technologies

JAXB, JDOM, w3c, RDF, XML, XSLT, XPath

Grid frameworks

GridGain, Infinispan, JBossCache, Hadoop, Memcache

Search platforms

Lucene, FAST, Solr, Hibernate Search, Compass

Concurrent versioning systems

Subversion, Git, CVS

Other Ruby technologies

JRuby, RJB, FeedTools, Curb, RMagick, Backgroundrb, tidy

Other languages

C#.NET, Perl 5, Groovy

Recent Employment & Experience

Senior Developer @ Sensis Pty Ltd.

Simon Magro, 222 Lonsdale Street, Melbourne, Victoria 3000

August 2008 - June 2010

Consulting at Sensis on the yellow pages service, a successful online directory of businesses in Australia.

- J2EE (Hibernate, Struts, Spring, Spring MVC, DWR, CXF, JAXB), Ruby (Capistrano), FAST, Oracle
- Heavy use of Agile project management & development practices (100% pairing, retros, 2-week iterations, short release cycles, etc).
- Extensive use of the FAST enterprise search platform.
- Upgrade back-end systems as part of Telstra's Morph project
- Build testing automation toolkit that provided an expressive domain specific language (DSL).
- Online project migration from Struts to Spring MVC
- Instrumental in architectural design decisions

Volunteer @ PBS Radio.

Jurgen Schaub, 47 Easey Street, Collingwood, Melbourne, Victoria 3066

November 2008 - Present

Volunteering at PBS to help upgrade their online streaming presence, as part of a complete online present overhaul.

- Java (Red5, Wowza, Hibernate, JAX-RS)
- Research use of various Flash live streaming solutions using Red5 or Wowza
- Build toolkits to aid in management of scheduled show metadata
- Design of a "white label" system that could easily be re-deployed for other community radio stations.

Lead Developer @ Netemic Ltd.

Tom Quick, Prospect Studios, 67 Barnes High Street, London SW13 9LE, UK

January 2007 - August 2008

Netemic's flagship product is iFeed, a platform for monitoring and extracting sociometrics on the internet for particular concepts and keywords.

- Java (GridGain, Hibernate, Lucene, JBoss Cache), Ruby (Rails, Drb, Ferret)
- Prototype a working platform using Ruby on Rails & Ferret
- Also made use of Drb, RMagick, Memcache
- Build a distributed web crawler to pull down and validate RSS and Atom content
- Build an indexing system to cope with millions of new articles every few days as well as very fast search performance.
- Research and implements NLP techniques (using WordNet, Information Theory, etc)
- Design the next generation system to provide a massively scalable indexing solution that makes use of MapReduce tasks written in a DSL (via JRuby and Mozilla Rhino). Designed on top of GridGain, Lucene and JBossCache

Developer @ The Public Gallery.

New Street, West Bromwich, West Midlands, B70 7PG, UK

February 2008

Guests at the gallery carry an RFID tag which is tracked by many readers around the exhibition space. This allows exhibits to be away of the proximity of various visitors.

- Java & JRuby
- Design and build an implementation of the specification that emulates user behaviour in the gallery. This allows artists to test their exhibit before installation.
- Implementation used Java5 & JRuby
- Provide a method of scripting user behaviour using Ruby (via JRuby) from explicit single user movements to probabilistic, highly concurrent, user behaviour.

Honours Project for BSc Computing,

Open University, Walton Hall, Milton Keynes, MK7 6AA, UK

January 2007 - December 2007

My Honours project for my degree was to design and build a distributed messaging platform that used a Publisher-Subscriber model. All identities were given by a user's public key, all messages identities were enforced.

- Design and build a public-key based, peer-to-peer messaging platform with dynamic, self-optimising routing and fault tolerance using the Java platform.
- Design a social news filtering system to work on top of the above messaging platform
- Perform a series of test metrics on the network at different sizes and network loads
- Perform academic research work for existing work in the area

Senior Developer @ IPC Media Limited.

Giles Bentley, Blue Fin Building, 110 Southwark Street, London SE1 0SU.

January 2007 - April 2007

IPC Media produce many of the magazines available in the UK. I was hired by their online department to:

- PHP5 (Symfony, MySQL, Propel) & Java (Lucene, Hibernate)
- Develop a modular solution to code-reuse across all web (PHP + Symfony) projects. Website features were implemented as plugins which new and existing projects could import, all of which would share a common, well-maintained, code base.
- Develop a Java/Lucene-based cross-domain search engine. Implemented as an appliance, it would crawl all of IPC's websites and provide a simple HTTP-based API for the websites to query against.
- Document proposals and implementations of the above two projects
- Lead a team of, and be a mentor to, 2-3 more junior developers
- Document proposals and implementations of the above two projects

Developer @ Modem Media.

82 Baker Street, London W1U 6AE

December 2006

I was hired by Modem Media, a digital agency, to develop the new version of the Cannes film festival website.

- PHP5, Propel & Oracle
- To plan and deploy a method of synchronising data from Cannes' own Oracle database to a remote, read-only, web server.
- To liaise with Cannes to determine how their existing data model was structured. Documentation was in French, so technical translations needed to be sought.
- Develop a data model in PHP, using Propel, and some domain-specific business logic.

Technical Director @ Echostream.

2A Fairfield Road, Bow, London. E3 2QB.

15th March 2006- Present

The Memefeeder project, detailed below, received funding, and became a full-time business. Since this was our own startup, my duties were quite broad and evolved rapidly. Running ones own business has given me a unique perspective as a Systems Architect and Developer to appreciate the business perspective.

The core product is a p2p streaming application that allows streaming of any kind of data over a dynamically reorganising 'grid'. This technique allows massive bandwidth savings as each listener is also a broadcaster. The resulting stream can be viewed in a web browser using an applet, or on the desktop using a small application and the user's favorite media player.

- Java (J2EE, Servlets, Hibernate, Wicket, JDIC, Java6), RDF
- Manage a small technology startup from both a technical and business point of view with 42 other individuals.
- Contribute to the development of the business plan pitching to potential investors
- Architect and develop a peer-to-peer streaming platform. Packets must be delivered in a time critical fashion while distributing the load between remote nodes fairly.
- Peer-to-peer grid designed to be intelligently self-optimising.
- Research and develop parsers for WMV, MPEG4, MP3 and Ogg Vorbis
- Port legacy C#.NET code base to Java
- Build a web-based RDF wiki to act as an authority for user-created metadata
- Write GUI-less applet that used Liveconnect to communicate with JavaScript (Imagine AJAX, but for Applets)
- GUIs written in Swing (first revision) and XUL/Gecko (using XPCOM to and XPConnect to bridge with Java)
- Architect and develop a peer-to-peer streaming platform. Packets must be delivered in a time critical fashion while distributing the load between remote nodes fairly.

Lead Developer @ Digit London.

Tom Quick. 54 – 55 Hoxton Square, London. N1 6PB.

22nd October 2004 – 15th March 2006

Digit is a digital agency based in London's east end. They are involved with the usual online marketing projects (virals, microsites, etc) but also with installations, both for art projects as well as marketing or point-of-sale devices for large clients such as Motorola. During my time here, i was involved in:

- Java (JOGL, J2EE, JMF, J2ME, Processing) & PHP5 (Creole, Propel & PEAR)
- Designing and building a generalised CMS that used reflection (in PHP) to automatically generate web-based forums to edit and manage various classes of objects, regardless of whether they were backed by a DB or not. This allowed rapid prototyping and deployment.
- Researched into video-processing, Built several Java projects that used QuickTime for Java and Processing to capture and process video signals and implement innovative methods of user interaction (such as gestures, etc) and realtime special effects.
- Researched into using OpenGL via JOGL (Java) to produce fast, fluid graphical effects in a programmatic manner, way beyond what flash was capable of. We implemented L-Systems (<http://en.wikipedia.org/wiki/L-system>) in 3D to produce realistic looking foliage for a WaterAid project installed at the Eden Project in Cornwall, UK.
- Used AMF & PHP5 to produce a standardised method of communicating between our stanard back-end data models (built using Propel) and our front-end (built using Flash or AJAX/HTML)