

# Adam Crossan

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## Profile

I am an artistically creative, technically proficient and adaptable software engineer. I hold a BSc (Hons) in Computing Science from the University of Glasgow; I have worked as a web designer and content editor on corporate sites, and as a Linux, network and database administrator. I have been involved in projects from both technical/programming and graphic design standpoints: handling tasks as diverse as systems analysis, report writing, marketing/identity consultation, data visualisation, and graphic design. I currently work in supporting and developing content-managed sites and web applications.

I combine low-level engineering abilities with a wealth of digital media/design knowledge. I pay attention to detail, but am always aware of broader system architecture concerns. My programming background is mostly in Java, though I maintain an eager and open-minded approach to new technology, and like to stay up-to-date and to question what constitutes best practice. I can adapt to many application domains, but my personal interest is most sparked by visual/graphical applications; first and foremost game development.

I am very team-spirited, though have also worked on numerous standalone, initiative-led projects. I balance driven development work with planning, design and documentation, and I'm thorough and exacting with written material and code alike. Having said that, I also firmly believe in aspects of the rapid prototyping style, in that code should be self-documenting, and elements of design often only emerge after implementation begins.

## Summary of Relevant Software Skills

**Programming:** High productivity with Java; proficient in Python 2.7 / 3.2 , PHP, C/C++. Prior experience in C#, Haskell, Ada, 8086 and MIPS. I use SVN version control, Eclipse, NetBeans, and Visual Studio.

**Graphics and Modelling:** High productivity in Blender, GIMP, Inkscape and Photoshop. Some experience with Flash. Video/sound editing with Blender VSE and Audacity/LMMS.

**Web:** Standards XHTML/CSS, HTML5, Firebug, Javascript, JQuery, Actionscript. Google Services, SEO, mod\_rewrite. Apache, Lighttpd, IIS.

**Databases:** MySQL/MariaDB, Sphinx, PostgreSQL; Oracle SQL+, Access.

**Operating Systems:** All Windows & DOS versions; several Linux distros (mainly Debian & Red Hat derivatives), UNIX.

**Other APIs/tech:** OpenGL, SDL, PyGame, DirectX9. XNA. And TeX.

## Work History

**Ehaus Ltd.** (August 2009 - present)

(<http://ehaus.co.uk>) Web Application Developer: development and support of in-house CMS running bookseller corporate/shop sites, based around full text search systems. I also developed a Javascript (jsonp) web service for external client site tie-ins.

**Digitl Ltd, Web & Graphic Design Firm** (May 2009 - August 2009)

(<http://digitl.co.uk>) Web Developer: working with Drupal to meet specified client project targets within tight deadlines, handling multiple client projects, developing custom PHP components for Drupal sites, as well as theming, templating and consulting on site design.

**LandLab Ltd, Public Art & Design Consultancy** (November 2006 - May 2009)

(<http://landlab.org>) Network and database admin, hardware/software support, CMS system and website developer, CAD and 3D visualisation artist / animator. Skills learned include advanced Linux network setup, maintenance and administration, user training, and rapid software development to meet business needs on tight time-scales.

## Education and Qualifications

### 2000 - 2004 University of Glasgow : BSc (Hons) Computing Science

#### *Computing topics (in detail):*

Programming: Imperative, Functional and Object Oriented. Data structures and algorithms. Algorithmics, logic, discrete mathematics. Language design; compilers. Graphics processing, artificial intelligence, constraint programming, neural networks. Low-level system (circuit & processor design, assembly) and CHDLs. Human Computer Interaction, professional issues, project management. Relational databases; database and internet technology. Interactive systems, web design & evaluation. Security & cryptography. Operating systems. Advanced networking (Fourier transforms etc), comms architecture/technology.

#### *Large-scale projects:*

3<sup>rd</sup> year (team of 5): an Othello-playing artificial agent.

4<sup>th</sup> year (team of 3): an eBay-like commerce site (Javascript, PHP, MySQL, Java/JDBC).

4<sup>th</sup> year individual project (dissertation): a vector-image synthesis tool and GUI, for conversion of high-resolution scanned raster technical drawings.

*Other Subjects:* Number Theory & Cryptography; Chemistry; Mathematics

## Interests

I devote a lot of free time to graphic design, animation, game programming and 3D modelling. I attended the 2011 Blender Conference in the Netherlands, and since November 2011 have been supporting and maintaining a Blender add-on I wrote for reading and rendering Minecraft world data.

I like to stay active in game development as and when I can, and continue working on small-scale game demos.

- *Feb 2011 'Completable Game' challenge:* A time-limited development challenge set by a friend. My entry may be seen at <http://acrossan.co.uk/boundlessblue>
- *Realms of Ashana* - a 2D action/adventure, this SNES-era top-down RPG has various design goals, and is a work in progress, but it currently demonstrates my broad knowledge of the fundamentals of game programming, including a custom scripting language interpreter, tile-based graphics, A\* Pathfinding, motion behaviours, procedural map generation, sprite frame animation, supporting tools (map/sprite editors) and other features.
- *Zephyr Echelon* - an 'xp' pair-programming project with fellow Glasgow graduate John Robertson; this is a vertical-scrolling shooter, with pre-rendered 3D graphics workflow, currently featuring discrete time-based play recording and replays (demo 'show mode') and a 'back-tracking' USP which remains to be fleshed out.
- In 2006/2007 I created some pre-rendered 2D character/enemy animations using UV-mapped, rigged low-poly models for an indie mobile phone hack-n-slash demo game, *Seven Seals*.
- Smaller tech demos including a turn-based RPG combat system, tetris clone, and networked battleships graphical client.

My recreational pursuits include drawing, painting, photography, creative writing, and reading. I enjoy real-time strategy games and RPGs, and I'm also keen on cycling and karate. My personal profile <http://acrossan.co.uk> contains some of my art material, game demos, and some web technology notes and tests.

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