

Ross M^cFarlane

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Profile

A mature, pragmatic individual, able to work independently and perform under pressure. Inventive, with a keen attention to detail; always seeking to learn and improve.

Skills & Technologies

Languages: C, Java, PHP, SQL, HTML, CSS, Javascript, Python

Tools: MPI, TextMate, Mercurial, Processing, OpenMP, PHPUnit, Subversion

Techniques: OOP, Design Patterns, Unit Testing, TDD

Education

PhD Computer Science, University of Liverpool — 2007–2010 (*Expected*)

- Project entitled *High Performance Computing for Computational Biology of the Heart*
- Studied and documented legacy C code
- Parallelised cardiac simulation tool for distributed memory machines using MPI
- Added realistic geometry of rabbit heart to simulation tool
- 2 papers published at international conferences in the first year
- Received full scholarship from EPSRC
- Elected to represent all postgraduate research students in the Faculty of Science and Engineering at the University subcommittee and Senate
- Expect to complete in September 2010

MSc Computer Science, University of Liverpool — 2006–2007

- Passed with Distinction
- Highest mark in the class (to my knowledge)
- Wrote my own genetic programming system in Java

BA(Hons) Sound Technology, Liverpool Institute for Performing Arts — 2001–2004

- Passed with First Class Honours
- Produced rock and pop recordings
- Made an interactive generative music toy in ActionScript

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Experience

Teaching Assistant, University of Liverpool — 2007–2010

Gave tutorials and demonstrated at lab sessions for undergraduate and masters students in research methods, algorithms and software development.

Web Developer, Dev8D Developer Decathlon — 2008

Worked as part of a 3-man team to produce a prototype web application for a contest funded by the Joint Information Systems Committee (JISC). Our project aimed to offer social interaction with peers when browsing online library catalogues. I provided the initial concept for the application and designed and coded the main web pages and javascript interactions. Our team came third in the contest, narrowly missing out on a cash prize and JISC funding to implement the project.

Python Developer, Foresite Project — 2007

Worked on implementing a web app to generate Object Reuse and Exchange (ORE) metadata descriptions of scholarly journals from jstor.org. This was my first experience with Python and, despite having been thrown in at the deep end, I was able to produce some useful code and assist in the development of the Python ORE library by reporting bugs.

I also produced a front-end application in Processing to traverse the generated ORE metadata using a novel, fluid interface. This application won the Repocamp ORE challenge, for which I received \$2000 from Microsoft Research.

Product Specialist, Audient plc. — 2004–2006

Dealt with most aspects of sales and support for this professional audio manufacturer and was solely responsible for writing and designing user manuals for software and hardware products. I also developed and delivered training presentations to support the sales activities of international distributors.

Drummer, Multi Purpose Chemical — 2004–2006

The band signed a record deal with Honey Records in 2004, making an EP and an album. We performed around the country in venues including London's Mean Fiddler. While it didn't really feel like a job at the time, being in the band taught me a lot about teamwork and how I can prepare in order to perform at my best.

Interests

I usually spend my free time either entertaining my two dogs or trying to get/keep fit. I go running with Rossendale Harriers and completed my first marathon this year.

I'm also one of those people who reads technical books for fun. I'm working my way through Knuth's *The Art of Computer Programming* at the moment.

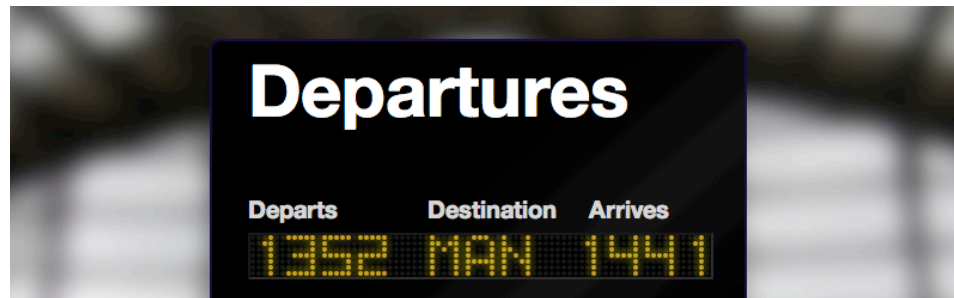
My print design experience at Audient has stayed with me, and I keep my hand in by designing theatre posters for amateur productions.

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Projects

Outside of my PhD work, I've developed a few small web applications to hone my front-end skills. Some of these toy projects have become quite useful in their own right.

Departures



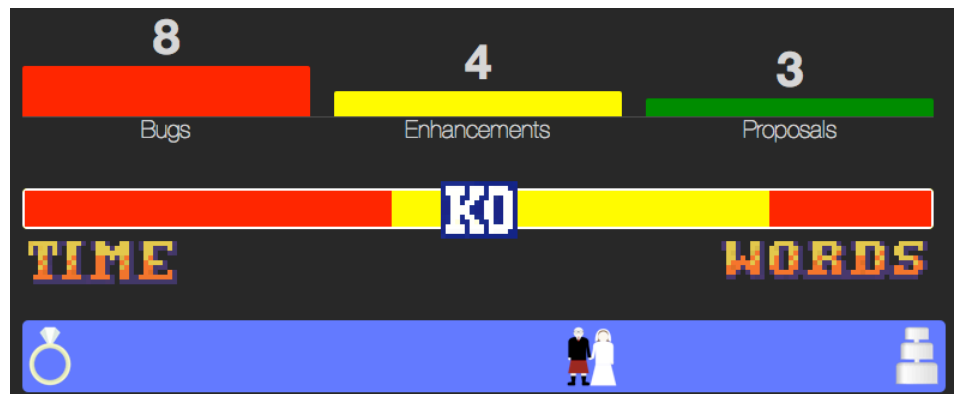
Departures is a my personalised front-end to the excellent traintimes.org.uk. A javascript class generates a faux-LED display using HTML canvas. A feeling of reality is achieved by the occasional faulty LED. The page is also designed for iPhone as a chromeless web app.

Flipclock



Inspired by Tim van Damme, I coded this flip clock in HTML, CSS 3 and Javascript. It is entirely imageless and infinitely scalable. I've used webkit animations to give a natural gravity to the flipping action. In addition to looking pretty, it keeps remarkably good time.

Status



I use this as my browser home screen to remind me of my priorities. Using Webkit transitions and AJAX, it displays a bar graph of bug counts from my issue tracker, a *Street Fighter*-style representation of my thesis progress, and a countdown to my wedding.