

Benedict Harcourt

Curriculum Vitæ

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Education

2008–2012 MEng in Information Systems Engineering from Imperial College London

2:1 Degree Classification

Associateship of the City and Guilds of London Institute

Selected Modules: Simulation and Modelling Language Processors Coding Theory
Probability & Stochastics Computer Networks Intro to AI
Concurrent Programming Distributed Systems Databases
Operations Research Network Security HCI
Complexity Theory Quantum Computing

Individual Project: Resource Management in Cloud Systems

2007–2008 A2/AS Qualifications, Bristol Grammar School

4 A-Levels: Maths (A), Further Maths (A), Physics (A), Russian (B), Chemistry AS (B)

10 GCSES (A* – C) including French and Russian

Technical Skills

I'm comfortable working in most desktop and terminal environments, with most experience in post 95 versions of Windows desktops, and working with Linux pseudo-terminals. I have done projects in Website Design (client and server side), desktop applications, command line applications, database design, and tool libraries.

Programming, Scripting Java, C++, C, PHP, JavaScript, \LaTeX , Shell (zsh + POSIX), PostgreSQL, MySQL, HTML, CSS, JavaScript (Vanilla + jQuery)

Major Tools Git, Vim, (GNU) Make, Netbeans, Visual Studio, Apache HTTPD, Apache SOLR, Various Linux Distros (Debian, CentOS)

Major Libraries JUnit, GNU Readline (C and PHP variants), ncurses, Kohana, CakePHP, JFreeChart

My areas of expertise are two fold; firstly, my open source work listed overleaf is primarily the design and implementation of both simulations and custom APIs in Java. These are listed overleaf.

The proprietary work I have done has been web development on Apache based systems, using PHP as a scripting language, and MySQL or PostgreSQL for databases. I have a good working knowledge of the current HTTP, HTML, and CSS standards.

Previous Work

2012–present Developer, Mindwork Labs

Part of the development team working on the deals website www.mydeals.com, including a major role developing the associated 'Trackr' API, a unified affiliation resource.

2010–2012 Casual Programmer, Institute of Biomedical Engineering, Imperial College London

(part time)

Developed a web application for the management of mailman distribution lists, including generation of membership directories of public lists.

Summer 2008, Summer 2009 Bookstore Assistant, Bristol Grammar School

As part of the team in charge of reclaiming and redistributing the textbook for over 1000 students, work ranged from relational database and associated paperwork / form design through to cataloguing of books and loading them in and out of storage.

Freelance & Open Source Work

A fuller listing of my work may be found on my Github account: <https://github.com/javajawa>. Some of these projects are currently closed-source at the request of their commissioners.

2012 / PHP

Acorn

An extremely light PHP framework designed to operate as a shared library, with focus on speed and compatibility with both *mod_php* and FastCGI implementations. It encourages, but does not enforce, a well-typed Model-Controller-View pattern.

2012 / Various

Static Site Builder

Most Websites are either entirely static or entirely dynamic pages. Static Site Builder takes an approach much closer to traditional programming, where as much work as possible is done at the 'compile stage'.

This not only allows operations like templating to be done once per deployment, but also offers the potential of pre-deployment tests and optimisations — checking for incorrect links, and stripping white-space and comments from files to reduce their size.

2012 / Java

Java Stochastic Simulation Library

Bringing together the ability to simulate most sections of modelling and stochastic processes that I have been taught, this highly generic library allows the rapid design of simulations at any level. The implementation attempts to ensure that the concepts defined are unusable in as many ways and ranges as possible.

2012 / Java

Mewler / InternetRelayCats / DoCitten

Initially a tiny IRC bot project, the three related projects quickly grew to three layers of code for building IRC clients — both for users and bots — emphasising separation of tasks.

The Mewler project now forms an open-source IRC binding for Java, offering an alternative to the now outdated pircbot. DoCitten itself started almost as a joke on the Department of Computing's IRC channel, and rapidly became a useful tool for such as link previews and reminder systems.

2011–12 / PHP

Technology Networks Pages

A mailing list and associated event registration system, capable of generating printable directories of members, event badges. Other features included integration with Imperial College's active directory and website.

2011–12 / L^AT_EX

L^AT_EX Utilities

A collection of customised, and customisable, templates packages.

The two noteworthy packages are *domimatrix.sty*, which provides shorter syntax for type-setting matrices, along with adding commands for Bra-Ket notation, and *crossword.sty*, which is a crossword type setting tool, capable of generating grids, clue lists, and solutions from input, currently in use in the magazine Wyrmtongue.

Other Experience

Alongside casual programming, I have been heavily involved with societies at Imperial College Union, as a member of the crew in a number of DramSoc and MTSoc (Musical Theatre) productions, and a serving member of the Science Fiction Society's executive committee for three years, including positions as secretary and systems administrator.

I have also gained experience in systems administration from helping to maintain the network architecture and joint shell/media server in my current residence.

References

References are available on request.