Alex Muller

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Profile and interests

I am very interested in the technical side of both the computing and communications industries and enjoy working on the user-facing design of software and systems (human-computer interaction). From my Computer Science course, I have become familiar with object-oriented programming and gained experience writing Java and Python. From Mathematics I have developed an interest in statistical theory that has been with me since school, choosing half of my Maths modules to be related to probability and statistics.

I am also interested in the creation of media including television, film and radio, as well as how technology is helping to distribute these kinds of content in new ways. I am passionate about using the web to enable free and open access to information, particularly through contributing to projects like Wikipedia and OpenStreetMap. Recently I have found myself increasingly interested in preserving the history of the web and considering issues like link rot.

Previous work and experience

Python and front-end web developer, GlaxoSmithKline R&D (July 2011–September 2011)

Over the summer between my industrial placement and final year at university I maintained an internal web application at GSK's Medicine Research Centre in Stevenage. The application was originally built predominantly using Python and JavaScript, and I was responsible for fixing bugs and adding new functionality as required.

Web & multimedia communications placement, GlaxoSmithKline (July 2010–July 2011)

During my placement year I worked on GlaxoSmithKline's corporate website as a member of their Global Media team. The placement involved writing HTML, CSS and JavaScript (primarily using jQuery) and working with non-technical stakeholders to understand and implement their requests. I was responsible for gathering information in preparation for a project to redesign the site, for example through interviewing users and creating surveys. A reference is available from GSKUK.HR@acs-inc.com.

One Click Orgs (April 2010–)

OCO is an online service to help groups with their legal, decision making and membership structure. I regularly work over IRC and in person with other volunteer developers, committing Ruby on Rails, Haml and Sass code to the OCO GitHub repository.

York Students in Schools (January 2009–February 2010)

I was involved with the York Students in Schools placement scheme, spending half a day each week at a local school to assist the teacher with activities and any computing issues or questions. I feel that the placement was useful in many respects, primarily because it greatly improved my explanatory and presentation skills.

Web developer, Nouse (2008–2009) and Web designer, YSTV (2009–2011)

At university I became very involved with media societies, including the student newspaper Nouse and the television station YSTV. Redeveloping the newspaper's website was invaluable experience for working in a team, reinforcing obvious good practices such as detailed code commenting. YSTV has offered similar experiences, though there what I found most useful were the weekly "station meetings", where I have been able to give opinions and be part of a group that makes decisions about the future of the station.

Bronze Duke of Edinburgh's Award (2005)

I completed the award while at school, which included volunteering locally and improving my knowledge of Microsoft Office through completion of the advanced-level European Computer Driving License. The expedition showed us how to work together as a team, both in the planning and undertaking.

Education

BSc Computer Science and Mathematics (with a year in industry), University of York, October 2008–June 2012 (expected)

Expected degree classification: Upper second-class honours (2:1)

Dissertation: Allocating optional modules to University of York students

My final-year project involved the creation of an application that allocates optional modules to students after collecting their preferences via a web interface. The creation of this application was supported by the University of York's University Teaching Committee.

The project covered two broad areas of computer science; the construction of the web application (which included gathering requirements, database design, user experience, testing & security), and performing the allocation based on students' preferences and factors like the number of students in a class, which is a constrained optimisation problem.

The application was trialled in March 2012 by the Archaeology & History departments and successfully allocated modules to 800 of their students. It is hoped that based on the success of this pilot, the University's IT Services will be able to offer the application to all departments next academic year.

Modules studied in the first year:

- Introduction to Computer Systems
- Computer Architectures
- Principles of Programming
- Practical Programming Skills
- Theory of Algorithms and Data Structures
- Calculus (I and II)
- Vectors and Complex Numbers
- Matrices
- Foundations of Mathematics
- Probability Theory I

Modules studied in the second year:

- Theory of Computing
- Design of Interactive Systems
- Logic Programming & Artificial Intelligence
- Computer Graphics and Visualisation
- Vector Calculus I
- Statistical Theory I
- Statistical Theory II
- Statistical Theory III
- Analysis I
- Introduction to Group Theory

Modules studied in the final year:

- Algorithms for Graphical Models
- Crypto, Attacks & Countermeasures
- Code Generation & Optimisation
- Applied Probability
- Introduction to Number Theory
- Generalised Linear Models
- Formal Languages and Automata
- Bayesian Statistics

St Paul's School, London, 2003–2008

A Level: Computing (A), Mathematics (A), Physics (C)

AS Level: French (A)

Referee

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