

WORK EXPERIENCE

Ocado Ltd, UK — Software Engineer, May 2007 – Present

Software engineer in the Webshop team.

Adobe Systems Inc, USA — Internship, Summer 2004

Intern in Acrobat Engineering, San Jose, California. Initially worked on 'Mars' – the next generation XML-based PDF document format. Then went on to work on the main C/C++ code-base of Acrobat 7, using Visual Studio.NET to implement new product features. As well as developing new features, a large proportion of the internship involved resolving existing issues in the main Acrobat code-base. This involved reproducing bugs, debugging and developing fixes across the massive Acrobat code-base. During my time at Adobe I became adept at using the Visual Studio and CodeWarrior debuggers, as well as the Perforce SCM system for source control and cross platform development on Windows and MacOS. Gained experience working on large-scale C++ systems, as well as the software development practices and methodologies necessary to work on sizable code-bases. Developed communications and organisational skills by working as part of a team within a large organisation. Delivered code that was shipped in Adobe Acrobat 7.

University of Nottingham UK, Reachout — March 2003 - April 2004

Maintenance and improvement of an in-house content management system built on ASP and SQL Server 2000.

Land Rover, UK — Internship, Summer 2001

Responsible for redefining the look, feel and structure of the existing fledgling intranet, which involved working with Ford Motor Company personnel both in the UK and the US. This included consulting with internal clients, the original graphic design right through to the implementation of ASP / SQL Server web-applications for deployment on the corporate intranet. Maintained existing intranet sites and consulted with both technical and non-technical internal clients regarding their use of the intranet. Provided technical advice for internal staff when dealing with external IT services companies.

University of Nottingham, UK — September 2002 - Present

Responsible for communicating and demonstrating technical skills to final year BSc undergraduates in a variety of subjects including software tools, technical document technologies, web programming and scripting. Planned, developed and assessed coursework in web programming for final year students.

Allman Horrocks Consulting, UK — Internship, June 2000 - September 2000

Served as a web-designer, programmer and systems administrator. Developed web-applications using ASP / SQL Server and Macromedia tools for clients. Was involved in consulting with SME clients.

EDUCATION

■ **University of Nottingham, UK — PhD. in Computer Science, February 2007.**

Developed an innovative method of addressing content in a physical document format (Adobe PDF) and bi-directionally mapping this content to a logical document format (XML). This increases document accessibility and the ability to repurpose documents by allowing the treatment of specialist content, such as mathematics, to be handled by industry standard tools working within the XML representation. The software created is an addition to Adobe Acrobat, implemented in high-level object oriented C++, utilizing the STL libraries. The software makes heavy use of document analysis techniques, as well as custom parsing and XML technologies such as DOM, SAX and XSLT. This work was sponsored by Adobe Systems Inc.

■ **University of Nottingham, UK — BSc. Hons. First Class in Computer Science, July 2002.**

Dissertation — created a web-server add-on to dynamically insert hyperlinks in web-applications, served from the Apache Tomcat Java Servlet engine. This takes place transparently to the underlying application. Also provided an innovative method for searching and navigating web sites via a custom search engine implemented in Microsoft SQL Server. This project involved the use of natural language processing techniques, a custom parser and an innovative use of information retrieval techniques.

Second year group project — developed a teaching toolkit for the travelling salesman problem, a classic combinatorial optimisation problem. Was elected as project leader by the other members of my group.

■ **Warwick School, A-levels Computing, A; Maths, B; Physics, A; General Studies, A (1997 –1999)**

■ **Warwick School, GCSE 10 grades A* - A, including Maths and English (1994 –1997)**

ACHIEVEMENTS & POSITIONS OF RESPONSIBILITY

- President, University of Nottingham Cycling, 2004 – 2005
- Vice President, University of Nottingham Duke of Edinburgh Society, 2003 – 2005.
- Duke of Edinburgh Gold Award (signed off, pending award).
- Project Leader, Second-year group project, September 2000 – June 2001.
- Communications Officer, Newark Hall JCR University of Nottingham, September 2000 – June 2001.

SKILLS

- Detailed knowledge of document technologies and document analysis techniques.
- Experience of commercial software development in C++.
- Detailed application design, implementation and optimisation.
- Logical and physical database design and management.
- System architecture design and refactoring
- Network setup and design.
- Windows and Unix system administration.

Programming Tools

Visual Studio (6.x - NET 2005), CodeWarrior (Mac), Perforce and Subversion source control systems (all 3 years).

Languages

C/C++ (including STL) – 3 years, C# (basic knowledge), Java – 2 years, PHP – 3 years, ASP – 1 year, Unix shell, Adobe Acrobat API (including in-depth knowledge of PDF document format) – 3 years

XML Technologies

DOM and SAX mode parsers, DTD, XSLT, XPath – 1 year.

Server & Web Technologies

PHP, ASP, JSP/Servlets, JavaScript, basic server administration (Apache, IIS, SQL Server, Exchange, MySQL etc.) (all 1 year)

Operating Systems / Systems Administration

Windows (Vista/XP/2000/NT4/9x), Mac OS X, Linux and UNIX variants.

Other

Clean UK driving licence.

PUBLICATIONS

- Enhancing Composite Digital Documents using XML-based Standoff Markup. (Thomas, Brailsford) *Proceedings of the ACM Symposium on Document Engineering (DocEng '05)*.
- Creating structured PDF files using XML templates. (Hardy, Brailsford, Thomas) *Proceedings of the ACM Symposium on Document Engineering (DocEng '04)*.

PERSONAL & INTERESTS

Needless to say I have always been interested in computers and technology in general; both as part of my career and during my leisure time. I find learning and applying new technologies and techniques both motivating and rewarding.

Aside from computers, my main hobby is mountain biking. I am an active member of the university cycling club, which culminated in my election as President in 2004/5. This involved managing a committee, helping to train newer riders as well as organising events, races and holidays – the biggest of which were two summer trips to the French Alps.

I have recently completed the Duke of Edinburgh Gold Award, which involved planning and undertaking an expedition, community service and a residential project. I volunteer at a homeless centre in Nottingham, initially to complete the service section of the award. This has involved working with unpredictable and sometimes difficult visitors, which has helped me to develop my communication skills and has exposed me to people from diverse backgrounds.

I enjoy travelling, in particular the US, where I lived and worked for three months. My other interests include photography, graphic design, cooking, music and the cinema.

REFERENCES

Available on application.