

Huw Lloyd

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For more than 20 years I have been interested in practices of software development and processes of learning and collaboration. I am interested in how software professionals can work effectively in order to design and produce powerful software artefacts.

Recent software related work

I am currently working on three related projects: development of a tablet application for childrens' handwriting practice (C++, Qt), writing of research papers and reviews in relation to Cultural-Historical Activity Theory and programming, and designing and presenting material for SQL database workshops.

- Apr 15 – Jul 15 Aria Networks, Software development contract*
Development of parsing components for router networking software (C++)
- Jun 13 – Jun 13 Brandmovers, Software development contract*
Development of a prototype program for processing facial gestures and eye movement (C++, OpenCV)
- Nov 09 – Nov 10 Barclays Capital. Front Office, Senior Developer
Development of servers for BarxFI, a browser-based single dealer trading platform for FI, and other portals using C++ technologies (Boost, Xalan, Xerces, Curl, Windows, C#, SQLServer, Linux, Talarian, Tomcat, Caplin, Web Services). Full life-cycle development, including DR, diagnostics and liaising with teams across the company.
The most significant program produced was a generic data source adapter server, providing browsers with streamed data on demand from any specified data server or web service, applying any specified filter (queries) to the data with programmable operations. Specifications were interpreted dynamically and supported recursive operations along with threading and timing configuration and user-specific namespaces (authentication). This was used to stream trading news updates to barx-fi web-clients.
- Sep 08 – Nov 08 Barclays Capital, Software development contract*
Fixed income market gateway connectivity for a large scale bond trading system, mostly implemented using C++ technologies (with some C# and SQLServer).
- May 07 – Sep 08 Etrading Software Limited. Senior Developer/Consultant
Etrading software is a small consultancy specialising in servicing real-time etrading systems. Typical services were oriented to projects of infrastructure diligence, high-performance solutions and consulting, for, predominantly, Fixed Income and FX systems (e.g. HSBC, ABN, Equiduct). Examples of my work include: full-life cycle port of a bond pricing engine for an investment bank; delivery of Market feed adapters for fixed income; requirements capture of marketing solutions to a pan-European equities trading platform service, for VWAP presentation; latency benchmark automated processing; design and development of multi-process, multi-threaded latency measurement tools of real-time systems; implementation of development infrastructures and Linux server administration.
- Jul 06 – Nov 06 Yahoo!, Senior Developer

* Services provided by my company, Bootstrap Systems Ltd

- The project focus was the interesting area of relating search expressions to geographic area, implemented in C++ and UNIX using statistics.
- May 05 – May 06 TNS, Senior Developer and Trainer
I provided technical training and system development for a mature development team transitioning to C++ technologies (Using Linux and Oracle), working on market research products related to measuring television audience viewing habits.
- Mar 04 – Dec 04 Isotek Electronics Limited. Software Development contract
I implemented a signal processing library, using template programming in C++, for the purposes of automated control of sub-sea welding technology for large embedded systems (Linux).
- Jul 01 – Mar 04 Dealogic Ltd. Software Developer
I provided technical leadership to Dealogic's rich client-server products delivering fixed income data to the investment banking community, implemented in C++ and Windows technologies (MFC, C#, SqlServer).
- Apr 01 – Jul 01 IQ Financial. Software Developer.
I worked on trading platform software for derivative equities markets, using C++ and UNIX technologies.
- Apr 99 – Apr 01 Logica. Software Developer/Consultant
My time with Logica was spent at a client site, working in the Defence sector, where I designed, implemented and integrated simulation products, such as Monte Carlo simulations of military engagements and signal propagation. (C++, Pascal, Prolog).
- Jul 97 – Apr 99 HSBC. Projects Technician
Between studies I worked as a member of the IT infrastructure projects team within the insurance business of HSBC Gibbs.
- Jul 95 – Aug 96 IBM. Systems support
I provided site-wide technical support, as part of a sandwich year, mostly pertaining to PC software, operating systems, hardware and networking.

Work on mediation and education

Research on mediation is typically located at intersection of education, technology and psychology.

- May 12 - Present Research on mediation and psychological development
In-depth research work in relation to the science of education and psychological development from the theoretical perspective of Cultural-Historical Activity Theory.
- Jan 16 Workshops introducing SQL RDBMS
The design and presentation of course material for acquiring basic SQL skills and understanding what relational databases are and how they are structured, designed for non-programmers.
- Oct 11 – Jun 12 Simon Education, voluntary Saturday school tutor
I provided tuition for children across all key stages covering mathematics and science.
- Jan 12 – Jun 12 Private GCSE tutor
On behalf of Simon Education, I provided private tuition. I have provided tuition for

- mathematics, science and history.
- May 11 – Present Laboratory of Comparative Human Cognition and MCA (Mind, Culture & Activity)
 Collaboration with science and academic professionals with respect to education, technology and rehabilitation (LCHC at UCSD, MCA journal, SARAH network) using cultural-historical and systemic (e.g. cybernetic) approaches facilitated by digital technologies. Research, technical support and administration of software systems for Laboratory of Comparative Human Cognition (UCSD) and “5th Dimension” activities.
- Jan 12 – May 12 Design and successful application for mediation research
 I wrote a proposal for psychology/mediation research that promises to advance the science of mediation in educational and other settings. This successful proposal represents a considerable body of studies, encompassing social developmental psychology, neuropsychology, education, educational uses of technology, systems sciences such as cybernetics and philosophy.
- Sep 06 - May 11 Psychology studies
 Completion of BSc Psychology, with a project focus on mediative processes involved in concept formation. The BSc was an evening based course. I was particularly interested in dynamic, educational and developmental psychology with respect to symbolic processing, concept formation and transitional phenomena in conjunction with mediation and personality
- Jul 01 – Apr 12 Mentoring and technical leadership of software development and its design
 Promoting the appreciation of complex systems and their robust development in many software development environments
- May 04 – May 05 SHAPE (Software as a Human Activity Performed Effectively) forum participation
 Exploring the human activity of writing software and the current state of its management
- Oct 99 – Jun 10 ACCU membership and participation
 Promoting excellence of software development, principally in the UK
- Sep 96 – Oct 98 Cognitive science studies
 Graduate and postgraduate studies in cognitive science, language processing and artificial intelligence

Technologies

I am familiar with the following software technologies.

Language/environments	C++, UNIX/Linux, LISP, Java, C#/.Net, Python, C, Smalltalk
Connectivity	Multi-threaded programming, sockets, client-server, comet/web portal integration
Libs/Middleware	STL, Boost, RFA, TIB, ION, MFC, Qt, SQLServer, XML
Conceptual modelling	UML/OOAD, architectural patterns, Real-time, Multi-paradigm programming

Formal education

MRes Education, University of Bath, 2013

BSc (Hons) Psychology, University of London, 2011

MSc Cognitive Science and Natural Language Processing, University of Edinburgh, 1998

BSc (Hons) Computer Science, Staffordshire University, 1997