MINERVA
STATISTICAL CONSULTING

Phone : (+44) 020 3828 7709

Email : info@minervastatisticalconsulting.co.uk

Simon Ennis

BSc in Computer Science (2012), Auckland University (New Zealand)

Educated in computer science, Simon has over 8 years of professional experience in highly technical, research oriented development environments.
He was previously programming officer at the University of Surrey, Guilford (CVSSP) where he was in charge of developing new libraries in C++. After a long career as a system developer and integrator he is now involved in consultancy and independent contracting.

His areas of expertise lie in:

• Development of matrix manipulation code.

• Compression algorithm optimization and the use of FPGAs.

• Conversion of MATLAB code to c/c++ binary's.

For more information on Simon's professional background consult his professional experience attached below.

SIMON ENNIS

WORK EXPERIENCE

Contractor

Oasis - London - October 2014 to May 2016

Main responsibilities:

Developing Restful DJango web applications using python,MYSQL,SQL Server. Web applications utilize c/c++ components on back end.

Metrology developer

January 2013 to July 2014

Name and address of employer: Semiconductor industry

Main responsibilities:

• Development of Qt interfaces to a c library and development of the c binary. Qt was used to develop the graphical user interface along with various graphs and charts of memory, cpu and network statistics. Due to an NDA I am unable to go into detailed specifics regarding how the network c library worked but it was secure, fast and robust with low latency and high throughput utilizing the user datagram protocol and a patented protocol to maximise bandwidth.

• I completed a review of compression algorithms to use on our protocol and the issues involved in compressing small amounts of data with current compression algorithms.

• Working on the c library using many c data structures and algorithms for linked lists doing things such as packet re-assembly.

• Performance enhancements such as loop unrolling and cache optimizations. I was involved with performance analysis reviews such as the possible use of FPGAs for encryption and compression algorithm parallelization.

Programming officer

Centre of Vision Speech and Signal Processing - Guildford - April 2006 to September 2010
CVSSP) Surrey University, Guildford

Main responsibilities:

• Development on a C++ reference counted platform independent computer vision template library. The library implements its own STL containers such as Arrays, Lists and Trees and Math for Linear algebra, Geometry and 3D modelling. It uses the POSIX threading model and RAII for class objects allowing the use of Boost compatible smart pointers.

• All development was done on Linux and has given me exposure to colour space conversion using matrix multiplications and bit manipulation. In specific, I was tasked with colour space conversion from YPbPr to RGB which allowed the capture of video in YPbPr and using post processing to convert it to RGB. This allowed users to capture more video in YPbPr as it was less data than in RGB.

• Development of hardware specific multi- threaded real time video streaming applications for writing and reading video to raid arrays striped for speed. The centre has a quarter of a petabyte of raw and compressed video.

Research students used to write algorithms in MATLAB and generate c/c++ code from it using MATLAB and then want to run them on an appropriate Linux machine. This code was usually compatible with previous versions of the GNU gcc compiler. Once the algorithms were proven then they would be incorporated into the c/c++ code base as part of RAVL.

• Providing support for MATLAB and other open source math's/science packages such as OpenGL and GNU math and building MATLAB generated C/C++ code with the MEX compiler. Converting users MATLAB algorithms to C++
Web site: http://www.ee.surrey.ac.uk/CVSSP/Software

Systems Integrator

Corizon - London - June 2004 to April 2006

Main and responsibilities

• Development of Java interfaces to legacy systems. Applications developed with eclipse and Java and deployed on Solaris under Apache. The systems involved j2EE Jsp's, EJB's and servlets using XML to communicate with other distributed applications. Some development of JMS, Perl, JavaScript and Java reflection along with the use of object persistence libraries and xml parsing libraries such as xpath and Hibernate.
• System development from a UML specification which provided the OOD objects to be modelled in code, I was also involved in the resolution of issues with the design.

Systems Developer

Music Carriers - January 2003 to February 2004 - Auckland, New Zealand

Main responsibilities:

Development of J2EE and Perl web applications deployed on Linux systems.

Key skills utilized Java, Eclipse, SQL Server, DB2, MySql

ADDITIONAL INFORMATION

Operating systems Linux (Both 32 and 64 bit) Ubuntu, Fedora, Suse, Windows XP, Mac, FreeBSD