



Devon Bowen

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Personal

Birthdate November 5, 1965
Citizenship USA / Switzerland
Residence Switzerland
Hobbies Archaeology, Diving, Flying, Music

Education

2010 Bachelor of Science in Geosciences from the Open University, England. Concentration in geochemistry and planetary sciences.
1988 Bachelor of Science in Computer Science from the State University of New York (SUNY) in Buffalo, New York. Concentrated study in hardware architectures, operating system design, and mathematics.

Employment

Independent Software Contractor, Zürich, Switzerland. Began accepting short-term contracts on a self-employed basis in early 2000. Contracts cover a broad range of technologies but generally focus on developing financial applications or e-commerce systems.

Olsen & Associates, Zürich, Switzerland. A small research and development company that specializes in the application of fractal theory to high frequency financial time series. O&A offers products and consulting for financial data collection, forecasting technology, and risk management systems. Customers include many of Europe's largest banks. Positions held at O&A include:

- 1998 Operations Manager. Created new work group within the company to take over routine product operations from the software group. Responsibilities included defining group goals and procedures, hiring technicians, designing the hardware and network infrastructure, and handling customer relationships.
- 1996-97 Software Manager. Managed group of approximately fifteen software engineers during various projects. Responsibilities included hiring, project monitoring, high level software design, and customer negotiations.
- 1994-99 Senior Programmer. Designed and implemented various tools and products usually as project leader. Because of the leading edge requirements of the company's research, nearly all systems were developed from scratch. The environment emphasized fully redundant, distributed, real-time designs.

State University of New York Department of Computer Science, Buffalo, New York. The department was an early adopter of Berkeley UNIX and made significant contributions to BSD development and GNU tools. Positions held at SUNY Buffalo include:

- 1987-94 System Administrator. Responsible for purchase, installation, and maintenance of the department's hardware and software. Managed a group of student assistants to develop software when needed by faculty.

1989-92 Teacher. Instructed courses in computer hardware architecture, assembly language programming, C programming, and operating system theory. Created a new course for advanced operating system programming in which students developed their own UNIX-like system on top of raw hardware.

Skills

| | | Expert | Experienced | Familiar |
|---------------------------|---|-------------------------------|----------------|---------------------------|
| Methodologies | OO Design UML | X | X | |
| Programming Languages | C C++ Objective-C Java (Sun Certified) JavaScript csh/sh Perl Ruby | X X X X X | X X | X |
| Markup Languages | HTML JSP (Struts) PHP XML (XML-RPC, SOAP) | X X X | X | |
| Infrastructure Frameworks | J2EE (EJB) SQL Struts Drupal | X | X X X | |
| Operating Systems | UNIX (Sun, Linux, Mac) VMS Windows | X | X | X |
| Multimedia Tools | Blender Photoshop / Gimp Povray Ray Tracer | | X | X X |

Projects

- 2011 Created a web-based resource and lab management system for the Carbonate Research group at Imperial College in London, UK. The site was based on the Drupal CMS which is a system written in PHP.
- 2006-10 Architected and developed the asset manager in the UBS internet banking system. The application was based on Java using the Struts framework and communicated with the database via an XML based J2EE interface. The application was designed generically so that it could run in multiple environments.
- 2004-06 Developed web applications to process international transfers and mortgages at UBS (the largest Swiss bank). Applications were developed using the Java-based Struts framework and the UBS proprietary WPS framework. Access to the database was via the UBS proprietary XML interface called MAP.
- 2005 Technical consultant for GP Enterprises in Texas. Evaluated a “single sign on” web site engine that had been developed in Java. Company investors wanted an independent opinion regarding the possibility and cost of redesigning the existing engine to use the more standard SAML “single sign on” protocol.
- 2004-05 Subcontractor for Open Book Systems in Boston. Work consisted of modifying and extending a geography web site written in Perl and using the mySQL

database. Projects have included developing a search engine and modifying the login system.

- 2003-04 Developed Apple MacOS product AdSanity that removes advertising from web pages. The software is an HTTP proxy and uses a neural network (artificial intelligence) to separate advertisements from other photos and graphics. It then removes the ads before delivering them to the browser.
- 2003 Developed SMTP/POP/IMAP proxy servers for automatic encryption and decryption of OpenPGP traffic. Used OpenSSL and XML-RPC for communication with remote key/license servers programmed in Java.
- 2001-02 More web application development for UBS as described above.
- 2000 Suite of examples to demonstrate the use of the TWIP wireless e-commerce middleware system from Tantau Software. Demonstrations combined a variety of protocols and techniques to create WAP cell phone services.
- 2000 Equity trading system that combined time series analysis with pattern recognition technology. The system generated daily buy/sell recommendations for short-term stock trading.
- 1999 Olsen & Associates Timing Indicator product from research specifications. This product worked in real-time to analyze currency time series data and deliver trade timing recommendations to the user.
- 1999 Database protocol translator. Moving from an older proprietary time series database implementation to a newer design required a proxy translator so that older applications could use the newer database transparently.
- 1997 Financial time series data filter from research specifications. Software for automatically flagging invalid prices from a time series in real-time. Prices were flagged based on the probability of validity as indicated by recent volatility.
- 1997 Olsen & Associates Historic Data product. This project defined the types of data that could be sold and then designed and implemented the software to extract and deliver this data to customers.
- 1995-97 High frequency financial time series database. A new language was developed to represent and store tick-by-tick financial market data by modeling the structure of individual instruments. An extended form of this language was then used to describe the desired data during retrieval.
- 1993-94 GNU compiler (gcc) front-end for the Modula-2 programming language.
- 1992 Various pattern recognition applications and tools for experiments in the application of a technique known as Stochastic Discrimination to such problems as handwriting recognition, weather forecasting, options market forecasting, etc. Work continues today in cooperation with a research group in Buffalo, New York.
- 1991-92 Port of Berkeley UNIX 4.3 to Data General AViiON systems. This work was done by a team of four. My work was in the low level interrupt handlers, process management, and development environment including a port of the GNU assembler (gas) to the Motorola 88100 CPU. The full port was not completed.
- 1990 Port of the GNU C compiler and debugger (gcc/gdb) to work on the Tahoe architecture. This work was done for Berkeley to provide a debugger that could

be used as their primary debugger for the BSD 4.3 UNIX port to the Tahoe architecture.

1988 Packet radio TCP/IP gateway prototype for the university LAN. This system allowed access the Internet from off-campus via radio. Hardware and software components were designed and built from scratch.

Languages

| | |
|---------|---------------|
| English | Mother tongue |
| German | Good |

Certifications

FCC Amateur Radio Operator – Technician Class
Emergency Medical Technician – EMT/Basic
FAA Private Pilot – Single Engine Land
Technical SCUBA Diving – Nitrox, Rebreather, Cave