

Joseph Davidson
Scientific and Web programmer
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Scientific programs and systems, parsing structured and unstructured text data. Internet and Web services, Databases, Perl/CGI, XML, ASP, Java, Bioinformatics, Simulation and Modeling,

Experience

September 2005 – Present, Digicon Corporation
September 2005 – July 2006, *Bioinformatics Programmer*

While working at the Genome Technology Branch (GTB) of the National Human Genome Research Institute (NHGRI) of the National Institutes of Health, I do database, web and genomic search projects to support lab scientists. Built a parsers to locate a nucleotide sequence and sequences that are precursors to peptides which may have been missed in BLAST searches . Accessed the Entrez system through an Perl API. Built a system to transfer data from the Entrez Gene to Locus Link databases. Parse large complex flat files to extract data. Was trained on using Entrez both through the Web interface and the Perl API.

April 2002 – August 2005, Interguru, *President*

Built and Maintained a [Mail Directory Conversion](http://www.interguru.com/mailconv.htm) website at <http://www.interguru.com/mailconv.htm> . The source code is on CPAN at <http://cpan.org/authors/id/I/IN/INTERGURU/> . The site gets 50,000 hits per month and has a Google page rank of 7. It runs on Linux, on both the remote server and my Linux server at home. Developed a Windows desktop application in Perl TK. Developed a site to translate English text and web pages into a phonetic spelling system at <http://jhd.freeshell.org/truespel/en/>

September 2001 – March 2002, Forum,One Communications, *Senior Programmer*

Specified, designed and wrote back-end proprietary middleware to provide their Web systems with a standard data interface, allowing the data itself to be maintained by the client. The system was written in Object Oriented (OO) Perl on Linux. While the system used Mysql as a back end database, it was designed to plug into other databases if needed.

May 2000 – August 2001, Wisor Telecom, *Technical Analyst*

Maintained and extended a parser designed to read and decompose telecom customer service records (CSRs) into an XML output. Built an XSLT stylesheet to convert the file to HTML for visual inspection. Wrote the DTD for the XML output. The parser, which can read all Verizon formats as well as GTE and Ameritech, has over a 95% success rate. This compares to a 80% success rate previously achieved. It is written in object oriented Perl (OO Perl) on Linux.

Developed several classes in Wisor Rep, an order management telecom tool, running under the BEA Weblogic server, using Java, J2EE and EJB.

March 1999 – May 2000, Idev.com, Web Developer

Idev a web service and consulting firm which offered integrated, full life-cycle online services. I was responsible for doing the back end integration for e-Commerce. All sites were delivered on schedule to the client's satisfaction. I produced the database and data validation javascript for these sites.

October 1998– March 1999, Verizon, Database Developer

Developed Intranet site with ASP and SQL-Server (Stored Procedure and Triggers). Site support sales and provisioning for high capacity (e.g. T1, T3) connections.

August 1998– October 1998, Verizon, Database Developer

Contractor for Unisys at Goddard Space Flight Center. During this short term position I developed a Perl/Sybase Web interface to access, search and update a software engineering quality control database. The project was completed ahead of schedule and beyond its original specifications.

December 1997– August 1998, Digital Commerce Corp , Senior Developer

Developed a site for software developers to post their product (Commercial, Shareware or Freeware). The site was built with IIS, ASP, JavaScript, ODBC and SQL-Server. It allows web user to browse a database of downloadable software. Led a team that developed an Electronic Commerce site for purchasing for federal procurement officials Documented federal purchasing rules and implemented these rules on the Electronic Commerce Web site. The project contained all phases from reiterative user specification, structured design, development to code walkthroughs.

Sept 1995 – October 1997, Interguru, President

Independent Consultant for Internet and Web Services, small office solutions. Teaming with MCI, Exxon and Arco for a demonstration remote tele-medicine project.

Certifications

truespel.com/en
www.interguru.com

Hardware and Software (include only those you have work experience with)

Hardware:

PC, Linux, Sun Sparc, IBM 370

Operating Systems:

Linux, Solaris, Windows, IBM 370

Application Software:

Networks:

Protocols:

Databases:

mySql, Oracle, Sybase, SQL server

Languages:

Perl, Java-EJB, C, Fortran, Javascript

Awards and Citations

Publications

“The Spectrum Orbit Utilization Program (SOUP) Used for the DBS Plan Analysis at RARC 83” (with others), IEEE Journal in Selected Areas of Communications, SAC-3, 1.

“Simultaneous Electron Density and Ion Temperature Measurements of a Moderately Dense Plasma Using Doppler and Stark Broadened He-II Lines” (with others), Applied Optics (Letters) v 17, p1481, 1978. “High Temperature, High Density Plasma Production by Vortex Ring Compression” (with others), Physical Review Letters, v 41 #3, p166, 1978.

“The Interaction between Two Force Free Plasma Vortices in the TRISOPS III Machine” (with others), Physics of Fluids, v 22, p379, 1979.

User Documentation which is either proprietary or classified.

Spectrum Orbital Utilization Program (SOUP) User’s Manual, International Telecommunications Union, Geneva, 1985 Spectrum Orbital Utilization Program (SOUP) Technical and Programmer’s Manual, International Telecommunications Union, Geneva, 1985 POP-3 Sonar System User’s Manual, Digital Systems Resources, Fairfax, Va. 1990 POP-3 Sonar System Technical Manual, Digital Systems Resources, Fairfax, Va. 1990 SDI-

Sim Space Dynamics User and Programmer's Manual, Atlantic Research Corp.,
Rockville Md, 1988