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OBJECTIVE

To obtain a career within a company that will utilize my wide range of skills, provide an environment that will facilitate learning, and give me an opportunity to contribute to the company's success.

SUMMARY OF EXPERIENCE

Over 30 years experience with computers and electronics. I have designed and built computers from scratch and then programmed them using a wide variety of low and high level languages. I have worked with micro-controllers to mainframes. Over the last 5 years I have been administering unix machines (Linux and IRIX) and local area networks along with various Internet/Intranet related activities such as setting up and maintaining web servers and web sites.

- 30+ years computer programming experience
- Higher-level languages: C (20+ years), Perl, PHP, Fortran, Pascal, BASIC, PL/C
- Scripting/other languages: SQL, HTML, xBase, AWK, Yacc, Lex
- Assemblers: 1802, 6502, 6800, 68x05, 6809, 680x0, 8080, Z-80, 8085, 80x86, 680x0, IBM 360/370
- 3D surface modelling (Rhinoceros 3D) and solid modelling (IronCAD)
- Use and administration of Linux since February 1995. Three years administering IRIX-based machines.
- Knowledge of digital and analog electronics (analog mostly related to RF).
- Administration of Apache and Netscape Netsite web servers, and the Excite search engine.
- 4+ years experience using and programming in QnX (a real-time operating system).
- Installation, upgrading, and use of a wide variety of Internet related tools and navigation programs.
- Administration and use of Windows '95 since April 1995.

EMPLOYMENT

Primary client - *April 2007 to Present*
Arbortronics, Inc. **Self-employed**
Embedded systems programming for an ARM-based CPU board running Linux. Program gathers data in real-time and prints a report. Program interfaces with various circuitry (buttons, switches, LCD, and other electronics) as part of an industrial process monitoring system.

March 2007 to Present
SiteSell, Inc. **Self-employed**
Fixed problems with Perl-based scripts used with a graphics editing program. Updated the scripts to allow client to move to a newer version of the graphics editing program.

January 2005 to November 2006
Primary client - Value Added Displays **Self-employed**
Worked with client to create and set up their web site and administered it. Developed a custom Kiosk system that boots off a 256M USB memory stick.

November 2002 to July 2003
Primary client - Faith Friends Christian Portals **Self-employed**
Set up and administration of a web site which used the PostNuke content management system.

November 2001 to December 2001
Primary client - The Edison Group **Self-employed**
3D surface modelling using Rhinoceros 3D.

mid June 2001 to mid November 2001
Primary client - Firan Technology Group **Self-employed**
Consultant to the Research and Development department. Used my knowledge of electronics and software to act as a link between the hardware and software teams in the development of a new sign system.

Nov. 1995 to Dec. 2000
Primary client - Tourism Technology Virtual Warehouse **Self-employed**

- Administrator for two SGI computers running IRIX, and the local area network.
- Maintained multiple web servers, created scripts to generate server statistics, and assisted with content
- Initiated regular backups of the SGI computers after arranging for purchase of a tape drive.
- Set-up one of the SGI computers with a modem to allow remote access to the SGI computers and the local area network for off-site administration.
- Created scripts to monitor traffic on ISDN line to the Internet and possible outages via use of SNMP.
- Installed a news server to provide collaborative discussions related to ongoing projects.
- Installed and maintained Sendmail, SAMBA, DNS, Majordomo, Oracle, and Excite search engine. Determined how to get the GCC C compiler installed and running on the SGI computers.
- Facilitated administration of the machines and saved the high cost of SGI's own development tools.
- Allowed use of public domain programs including Apache, SAMBA, Majordomo, and SNMP utilities.
- Created a publicly accessible web page that lets others know how to get GCC running on an SGI.

Created dynamic web pages using a SQL database (MySQL) and PHP to keep track of details regarding the 123GoTravel radio programs allowing listeners to find information about past and upcoming programs.
Provided support for users running Windows based computers.

1990 to Aug. 1995
VMI Communication and Learning Systems, Ltd., Toronto, ON. **Software Designer**
Solely responsible for the development and ongoing maintenance of the PEAC System real-time data collection and analysis software used by the Measurement Services Group and by various licensed users in the U.K., Brazil, and Asia.
Determined the changes needed to the circuitry of the PEAC System hand-held units to obtain RF type approval in the U.K after the units failed the first tests.
Initiated and completed the port of the PEAC System from the QnX operating system to standard 80x86 DOS.
Rewrote the graphics routines of the PEAC System software to support various graphics adapters (including the Targa16+ graphics boards and Matrox brand graphics card). This included modifying the low level routines which directly accessed the graphics boards.
Diagnosed and repaired computer hardware and software problems.
Assisted in the creation and maintenance of the company Web pages.
Created scripts and procedures to automatically generate statistics for the Web server.
Created a script based install program for the PEAC system. Assisted in location and evaluation of new technologies.
Evalutated the use of OS/2 operating system for a product in development.
Diagnosed and repaired computer hardware and software problems.

Mar. 1985 to 1990
VMI Communication and Learning Systems, Ltd., Toronto, ON. **Engineering Technologist**
Developed hardware and software for use by the manufacturing department to test operation of in-house developed computer based products prior to their being shipped. Documented the operation of the test equipment and procedures and trained the manufacturing staff.
Worked with engineers developing the computer based products, reviewed schematics, tested and debugged

initial prototypes.
Worked as part of a team in the development and maintenance of the PEAC System real-time data collection and analysis system eventually becoming the project leader. The PEAC System was a medium scale project running under the QnX operating system involving approximately 48,000 lines of C code.
Met with the users of the PEAC system in the Toronto and Chicago offices to prioritize and plan the future direction of the software.
Ported the PEAC System from QnX to DOS. Created a custom installation program for the PEAC System.
Diagnosed and repaired in-house computer hardware and software problems.

Oct. 1982-Aug. 1984
EcoSea Technologies Corp., Toronto, ON.
Developed a microprocessor based French keyboard adapter for Apple computers.
Diagnosed, repaired, and upgraded Apple][,][+, and //e (and other) computers. Aligned floppy disk drives.
Handled shipping and receiving, data entry for the computer based accounting system, typing of letters when the secretary was unavailable, and various other tasks as required in this very small company.

1981-1982
Ryerson Polytechnical Institute, Toronto, ON. **Student Operator**
Wrote programs in PDP-11/34 assembler for use, by a computer science teacher, as examples for other students.
Provided help in a computer lab to students having problems with their programs.
One of several student operators of a PDP-11/34 minicomputer running RSX-11/M.

EDUCATION

Electrical Engineering Technology with Computer Science Option at Ryerson Polytechnical Institute, Toronto, ON.
Graduated from Grade 13 of George S. Vanier Secondary School, Toronto, ON.

Current (and ongoing) projects, and interests

- Use and administration of Linux since February 1995.
- Created a DOS-based logging program for the Ontario QSO Party radio contest in 3 weeks. The program was released for general use through my web site.
- Designed the circuitry (and currently finishing the program for) a microcontroller based add-on for Ramsey VHF and UHF transceiver kits which will provide direct frequency entry and readout.
- Shortwave radio listener since 1976 and a member of the Ontario DX Association since 1985.
- Amateur radio operator since 1992 (fully licensed).

Past personal projects and achievements

- Designed and programmed a 68000 based CPU board for use as a general purpose controller.
- Designed and built a microcontroller based device to provide direct frequency entry for Yaesu brand radios.
- Modified a Motorola D2 evaluation kit to use a 6809 CPU instead of a 6800 CPU. This included designing an adapter to allow a 6809 to be installed in the socket meant for a 6800, modifications to the support circuitry, and rewriting the on-board firmware to fully support the 6809.
- Created local area network using Ethernet cards and TCP/IP for two computers (a '486 computer and an Amiga 2000).

Volunteer work

- Mentored a student for the 2006 Google Summer Of Code program. Helped student successfully complete creation of a Ruby language binding for the GNU Image Manipulation Program.

- Manager for the two-way radios used in Toronto for the 1997 Special Olympics World Winter Games.
  - Accepted position two months before the games.
  - Worked with venue managers to confirm requirements.
  - Determined number and allocation of frequencies for radios to be used at the different venues.
  - Arranged for support staff at competition sites.
- Was one of two equipment managers for the VE3CNE committee for 6 years. The committee was responsible for all aspects of the amateur radio display at the annual Canadian National Exhibition.
  - Responsible for the setup and configuration of the computers and interfacing some of them to the radios.
  - Shared responsibility of overseeing daily operations of the booth with the other committee members.
  - Interacted with the public who visited the VE3CNE display during the 18 day run of the CNE.
  - Explained the hobby of amateur radio and shortwave radio to the visitors.
  - Demonstrated aspects of the hobby using the equipment available at the booth.
- Assisted with communications for the Warriors Day parade at the CNE for 7 years.
- Demonstrated and explained shortwave (and amateur) radio at several hobby shows for the ODXA.
- Part of a team of radio operators using packet radio to help with scoring of the Tall Pines Car Rally.
- Was elected President of a local amateur radio club by the general membership after I had been with the club for only 6 months. Later I became co-chair of another local amateur radio club.
- Created, maintained, and hosted web pages for the Primedia media and SF convention for almost four years.
- Hosted and maintained web pages and mailing lists for the Toronto Trek science fiction convention for two years until the convention committee obtained their own host. Was a member of the convention organizing committee for several years.
- Remotely administered a Linux based computer for 5 years.