DEVON STOPPS

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Objective

To apply my strong business, research, design, experimentation, and analysis background to new system design and experimentation in an Engineering position.

Education

BSCE in Engineering Physics/Electrical — September 2003 - December 2007
Queens University — *Principal's Scholarship*
Queen Elizabeth II "Aiming for the Top" Scholarship

Experience

Infra Construc (Canada) Corporation — September 2010 - present
Manager: Operations, Research and Development
www.infraconstruc.com

This role began with design and prototyping of a rugged data collection unit with remote access, solid state cooling system, and wireless sensor modules intended mainly for LIDAR GPS coordinate correction. Other projects included modelling stress/strain, solar/heat/wind load analysis and design review of a $35M pumping station. A focus on business development has included the launch of a new company in the biogas cogeneration sector. Experience was gained liaising with government regulators (MOE, OMAFRA, CRA), as well as with financial modelling, valuation, and cashflow analysis that successfully secured funding for clients. As part of managing a small business, a comprehensive understanding of accounting, offering memorandums, flow through shares, and Scientific Research and Experimental Development (SR&ED), corporate structuring, and business tax planning was developed. Part of this role included managing a software development team, web development team, unix application servers and project management for a variety of construction projects.

Nanoscale Devices Laboratory (Dr. R. Knobel) — January 2008 - May 2010
Queen's University - Department of Physics — Research Engineering
(613) 533-2672 — *www.physics.queensu.ca/~knobel/*

This role focussed on the refurbishment and redesign of a millikelvin helium dilution refrigeration system to support high frequency measurements on nanoscale devices. This included development of low level measurement systems, device design and manufacture in a cleanroom, design, selection and fabrication of mechanical & electrical parts, transmission line electromagnetics simulation, electronics troubleshooting and repair, as well as some 1st year university level teaching. New instrumentation was also designed and debugged, including a isolated low-noise voltage supply, microvolt detector, highspeed analog current switch, serial DAC interface, and electron microscope parts.

Queen's University - Department of Physics May 2007 - October 2007
Engineering Technologist

Concentrated on the development and updating of rugged experimental systems used in the 4th year teaching laboratory including: development of hardware and linux-based software for laser CCD image capture and processing; labview software to automate data acquisition using rotational stages and microwave detectors; design of low-noise, low voltage data acquisition interfaces for low-temperature physics; repair of several system-voltmeters, oscilloscopes and stroboscopes; as well as selection of a new digital monochromator.

Northumberland County May 2006 - September 2006
Transportation and Waste Department Project Optimization Engineering

Spearheaded the optimization of updates to the local commingled recycling program.

DPi Computer Services June 2001 - 2010

This entrepreneurial business provided onsite services to home and small business clients. These services include networking, troubleshooting and support, upgrades, large system integration, small programming projects, and training. The responsibilities of running a business also included communications and customer relations, marketing, billing, accounting, and project estimation.

Consulting Projects:

- Low Cost Multichannel Analyser (MCA) for Nuclear Physics Experimentation
- Automated Erosion Control Design from LIDAR Terrain Data

Other Projects

Personal Scanning Electron Microscope (SEM) Refurbishment July 2010

Purchased non-working surplus SEM and refurbished successfully for hobby use.

General/Electrical Manger for Queens Fuel Cell Team September 2005 - May 2008

Responsible for team dynamics, specifications, safety, team communication, and integrated power control system design.

High Current Charge Controller for Hybrid-Electric Vehicles September 2006 - May 2007
Phys 455 Thesis *www.devonstopps.com/thesis*

Concentrated on the design of a precision, high-current, rapid battery charger.

Rubidium Atomic Clock September 2006 - May 2007
Phys 450 Design Project *www.devonstopps.com/projects/atomic_clock/*

Design and implementation of microwave frequency synthesis and feedback system.