

# Andrew Diemer

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## Objective:

To obtain a position related to my studies in Electrical Engineering

## Education:

### **Undergraduate Electrical Engineering**

University of British Columbia – 4<sup>th</sup> year

- Awarded President's Entrance Scholarship
- Minor in Commerce

### **High School Diploma**

- Rockridge Secondary School - High School Diploma, (2005 – 2010)
- Scholarship for Outstanding Academic Achievement and Service
- Awarded Honours with Distinction

## Technical Projects and Groups:

### **UBC Capstone Project for B.C. Children's Hospital**

Wellness Tracker for B.C. Children's Hospital

- Designing a web based application to allow patients and medical professionals to track the well-being of patients during and after treatment
- Designing applications with Python, JavaScript, HTML, and CSS.
- Database design using Django Web framework

### **Biomedical Engineering Student Team Member**

Design of therapeutic device to aid individuals with peripheral neuropathy

- Providing real-time feedback to user by sensing pressure differences on the soles of shoes and notifying by vibrations
- Currently working on motor control by using NMOS transistors to regulate output voltage and current from microcontroller
- Extensive testing and circuit debugging required
- Working with Altium, and circuit maker
- Project completion date of April 2014, for submission into health-related technology design competition (BMESStart)

### **UBC Concrete Toboggan Design Team**

Design vehicle for National Competition – Braking and Steering System

- Implementing a signaling system for the driver to indicate when steering or braking should be used during the race, depending on the vehicles speed
- Heavy use of Solidworks

### **IEEE – Institute of Electrical and Electronics Engineers**

Engineering in Medicine and Biology Society (EMBS) representative

- Organize guest speakers & industry exposure for fellow students and IEEE members
- Conduct group meetings

## **Technical Skills:**

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- PCB design – Altium, AutoCAD, Solidworks
- VHDL - Digital system design
- Signals and systems analysis -
- C and C++ - Operating systems principles with real time systems and in multi-threaded programming, data structures
- MATLAB, R
- Diode and BJT analysis
- Semiconductors, piezoelectric and dielectric material analysis
- Spectrum analyzer use in RF lab and project
- Operational Amplifiers – Filters and bandwidth design
- Circuit debugging with oscilloscopes, and multimeters
- UML design and modeling
- Microsoft Office – Word, Excel, Power Point, Outlook
- Technical communication with report preparation and oral presentation skills

## **Experience:**

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### **Blackberry**

Summer 2013

*Embedded Developer, WLAN Firmware & Protocols*

- Design, development and maintenance of 802.11 radio code and protocols, Wifi security and Quality of Service code
- Working in a real-time embedded environment
- Working with unix for running scripts and debugging code

### **Lions Gate and St. Paul's Hospital**

Summer 2012

*Cardiac Rehabilitation – Systems and Patient Assistant*

- Performing medical machine diagnostics & recording and analyzing patient data
- Interacting with patients both individually and in groups

### **Tamwood International Camp, Whistler BC**

Summer 2011

*Sports Director and Counselor*

- Responsible for programming all sports activities for 150 campers and ESL students

### **West Vancouver School Board**

Summer 2009 & 2010

*International Student Counselor and Leader*

### **Department of Oceans and Fisheries, Center for Aquaculture**

- 2009 Summer Internship, West Vancouver

### **Hip Digital Media**

Summer 2008

*Data input and Software Tester*

- Performing data input, designing spread sheet templates and analyzing data trends
- Quality assurance testing for various websites - including the Aeroplan Music Store

## **References**

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Available upon request

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