Kevin Lavery

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PROFESSIONAL PROFILE

- 20 months engineering co-op experience
- Interested in working for a high tech company with opportunities to be involved in both the design and manufacturing aspects of projects
- Designed concept for Arduino controlled espresso machine
- High level of experience with MS Office, AutoCAD, and engineering design softwares

EDUCATION

BEng Mechanical Engineering – Business Minor August 2013
University of Victoria

SKILLS

Project Management

- Coordinated Innovative Design event for Western Engineering Competition 2013, liaised with competitors and judges, scheduled event, and pre-organized equipment and venue
- Lead team developing a 3-axis CNC milling machine, organized meetings, ensured timelines were met, and communicated with various stakeholders
- Studied process engineering, forecasting and inventory control, quality management and material requirements in a planning and control of production systems course
- Consulted many engineers, technicians, and vendors designing pipeline repair sleeves while working with FortisBC

Engineering Design

- Completed various technical drawings with AutoCAD while working at CFB Esquimalt with The Department of National Defence
- Designed pipeline repair sleeve based on CSA Z662 design standard at FortisBC
- Used Solidworks and NX to model airplane parts in a CAD course, studied the development of interactive 3D computer graphics programs and numerical optimization and its application to parameter design
- Designed pre-build concept for a low cost Arduino controlled espresso machine

Instrumentation

- Designed all aspects of a microcontroller run espresso machine, including accurately and consistently controlling pressure and temperature, use of voltage dividers to approximate sensor outputs as linear and use of Wheatstone bridge to account for fluctuations in ambient temperature
- Interest in learning instrumentation lead to a course about fundamentals of instrumentation which included in-depth learning about 0^{th}, 1^{st} and 2^{nd} order systems, sensors and transducers for common physical measurements, concepts were reinforced through hands-on labs
- Course detailing mechatronic systems and modeling, learned to use spec sheets, I/O lists, microcontroller programming and data acquisition to complete a sorting machine project

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WORK EXPERIENCE

Children Science Camp Instructor (while fulltime student) September 2012 – May 2013
Science Venture - *Victoria, BC*

Project Management Office Engineering Co-op January 2011 – August 2011
Fortis BC – *Surrey, BC*

Distribution Asset Management Engineering Co-op June 2010 – September 2010
Terasen Gas – *Victoria, BC*

CAD Technician January 2009 – May 2009
Department of National Defence, Geomatics Office – *Victoria, BC*

Civil Engineering Technician – Land Development & Municipal Engineering May 2008 - September 2008
Timberlake-Jones Engineering – *Parksville, BC*

VOLUNTEER EXPERIENCE

General Volunteer Summer 2010, 2011 & 2012
Rifflandia Music Festival – *Victoria, BC*

ESS Director at Large January 2010 – April 2010
University of Victoria – *Victoria, BC*

WEC 2013 – Innovative Design Coordinator October 2012 – March 2013
University of Victoria – *Victoria, BC*

Orientation Tour Group Leader September 2010
University of Victoria – *Victoria, BC*

PROJECTS

3-Axis CNC Styrofoam Cutter Summer 2013

- Worked in a team of three to design, build, and test a 3-axis CNC Styrofoam cutting machine
- Designed to customer specifications, weighed multiple potential designs based on criteria, purchased parts, documented, and implemented the final design

Material Sorting System Spring 2013

- Calibrated sensors on machine that sorted plastic and metal pieces of various colours and materials
- Created and standardized a test procedure for sorting the materials

INTERESTS

- Snowboarding
- Reading
- Brewing
- Cycling
- Travelling
- Camping