ABOUT

I am a chemical engineer with an emphasis in process control. I’m interested in the continuation of my technical and non-technical skills, in both my area of expertise and outside. My hobbies include learning to program, playing the guitar and weight lifting. I am currently looking for employment as an EIT where I can continue to develop my technical skills.

WORK EXPERIENCE

JR PROCESS ENGINEER

NORAM ENGINEERING AND CONSTRUCTORS LTD

NORAM Engineering is a consulting company which “develops, engineers and commercializes technologies for the processes and resource industries”. While working for NORAM day to day activities included: performing process design detailed calculations, such as mass balances, equipment sizing, line sizing, hydraulic and pump sizing as well as material selections. Hydraulic calculations were performed within FluidFlow3. Larger projects that were done while at Noram included creating Mass and Energy balance or Process Flow Diagrams for entire Sulphuric acid plants. As well as developing computer programs within MathCad to calculate temperature and mass transfer profiles within an absorption tower.

JAN 2016 - AUG 2016 | Vancouver, Canada

ASSISTANT RESEARCH ENGINEER

INNVENTIA AB

INNVENTIA is a “world leader in research and development relating to pulp, paper, graphic media, packaging and biorefining”. One project which I worked on was the design of a data recording system which was capable of measuring the dewatering speeds of pulp fibers onto pulp screens. This system was used to develop a correlation between paper qualities and dewatering speeds. Day to day activities included measuring typical pulp qualities including tensile, stiffness, strength and burst. I was also part of a team that work with a number of functional fibers such as PLA, Hemp, Softwood, Hardwood and recycled fibers such as clothing materials. The idea of this project was to learn how different types of fibers compare to classical wood fibers. Results were reported in a scientific paper which is to be submitted to the scientific journal-cellulose.

MAY 2015 - AUG 2015 | Stockholm, Sweden

ASSISTANT RESEARCH ENGINEER

CANFOR LTD

Canfor is “one of the world’s largest producers of sustainable lumber, pulp and paper”. While at Canfor I designed a visual basic (VBA) program which was capable of extracting text files from a Pulp Eye machine, a fiber property analyzer. This program was also capable of retrieving specific data information and was capable of logging it into an excel program. As a team member I conducted multiple trials within a pulp mill to develop a new grade of pulp capable for use in electronic applications. Day to day activities at Canfor include conducting pulp quality tests

* Developed a new pulp grade for electronic applications in industry plants
* Measured pulp quality including; conductivity, pH, tensile, tear, freeness, brightness and burst
* Assisted running a pilot plant sized refinery to conduct energy specific pulps
* Performed chemical analysis using an ICP (inductively couple plasma mass spectrometry
* Performed routines strength audits as part of a team at the Prince George pulp mills

MAY 2014 - DEC 2014 | Vancouver, Canada

ASSISTANT RESEARCH ENGINEER

INNVENTIA AB

* Designed mechanical components of a novel Micro-Fibrillated Cellulose (MFC) production system including the rotor, shaft, fluidizer using SolidWorks 2011 and worked with the machine shop to fabricate the system
* Learned Labview independently and used it to integrate a computer, National Instruments DAQ with the MFC system sensors (pressure, temperature, torque and speed)
* Designed, built and tested a flow loop made from PVC pipe and a positive displacement pump
* Created MFC using the system and experimentally determined the impact of MFC addition on never dried Northern Bleached Softwood Kraft (NSBK) pulp using conventional pulp quality analysis
* Measured the resulting pulp quality including tensile, tear, bulk, freeness, fiber length, brightness

MAY 2013 - AUG 2013 | Vancouver, Canada

PORTFOLIO

CHBE Brewing Club

CHBE Brewing is a club that is working on optimizing and perfecting the art of making craft beer. This is done by measuring the temperature and pH of the brew and making sure optimal levels are kept for the specific type of barley and wheat strains

BC Water Project

The BC water project was a design project where the goal was to design a tertiary water treatment system that was both economical and technologically feasible. The design utilized a Photo Bioreactor in order to reduce the phosphorus discharge limits.

Fourth Year Design Project

My fourth year capstone project was to design a 1200MTPD Sulphuric Acid plant. The process was simulated using Aspen Plus 7 and HYSIS with experimental reaction kinetic data, along with a simulation full P&amp;ID were developed