

TECHNICAL SKILLS

Computer Skills

- AutoCAD 2015
- Microsoft Office
- Matlab
- Aspen Plus

Tools/Electrical Equipment Skills

- PulpEye, Pulp Refiner & Digester
- Pilot Plant Distillation Column
- Soxlet
- Hand Drafting
- Various analytical Lab equipment

Certifications

- Certificate in Engineering (KPU)
 - BC Class 5 Drivers License
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EDUCATION

University Of British Columbia

September 2015 – May 2019

BASc Chemical and Biological Engineering

Kwantlen Polytechnic University

September 2014 – May 2015

Certificate in Engineering - Completed

Simon Fraser University

September 2013 – May 2014

First Year General Engineering – Transfer Credits

WORK EXPERIENCE

Canfor Pulp Innovation

January 2018 – August 2018

Research Assistant, Co-op Term 3 & 4 (Consecutive Terms)

Quality Control and Assurance:

- Aided in refining of received pulp, used it to create a wide range of parameters for testing
- Produced up to 200 handsheets for testing per day
- Tested destructive and non-destructive properties and compiled results file
- Kappa Testing
- Soxlet Sample Testing

Auditing and Reforming – Pulp Mill Process:

- Travelled to Fort Saint John to aid in audit of pulp mill process
- Worked with shift manager to take pulp samples from various parts of the pulp process throughout the mill
- Prepared samples for shipment back to Burnaby

Experimental Testing:

- Pulp Brightness Testing: created and developed an extramental plan to test handsheets of various compositions in order to test their brightness
- WBL and Soap Testing: tested for acid number using traditional and microwave acid digestion

Sample Testing and Preparation:

- ICP and GC: sample preparation using Dichloromethane
- PulpEye: sample testing and troubleshooting of machine

Process Review and Upgrade:

- Domtar Hot Water Disintegrator: reviewed the lacking safety measurements, provided an analysis to immediate supervisor and created a safe use procedure. After testing the new safe use procedure, the new procedure was implemented and I trained colleagues on the procedure
- Digester: reviewed the digester unit and created a P&ID for review when upgrading unit

Ecoation Innovative Solutions (EIS) Crop-Sense

May 2017 – September 2017

Engineering Intern, Co-op Term 2

- Collected data from Tomato crops using a device designed and made by EIS,
- Scanned over 2500 crops daily to provide accurate and consistent data,
- Cross referenced physical data with computer software to ensure assignment compliance for each crop,
- Worked successfully with minimal supervision,
- Operated and tested developed AI software to increase the scanning capacity,
- Troubleshooted software and repaired hardware to maintain working condition.

Engineering Intern, Co-op Term 1

September 2016 – December 2016

- Collected data from Tomato crops using a device designed and made by EIS,
- Scanning over 120 crops each day in order to provide accurate and consistent data,
- Performed daily tasks with minimal supervision,
- Monitored computer software to ensure assignment compliance,

Mentor

- Tutored up to 8 kids between the ages 5-17 in English, Social Studies, Math and Science,
- Daily tasks included: explaining key concepts, providing homework help, and assisting with creative methods and techniques for memorization and learning to increase their overall class grade

TECHNICAL PROJECTS**Ethanol Production from Lignocellulosic Biomass**

September 2018 – April 2019

- Designed an industrial plant and process to convert wood waste to ethanol for use in fuel.
- Designed pretreatment step for biomass to remove lignin and prepare feed for fermentation
- Created PFD and P&ID for designed plant
- Creating full Aspen simulation, HAZOPs analysis, and a 3D plant layout model

Line Following Robot

March 2015 – May 2015

- Programmed a line following Robot,
- Designed and coded an algorithm in C to allow the robot to make decisions based on obstacles encountered. The robot used several photosensors to “see” obstacles and avoid them accordingly.

Design Project: Kayak Cart for Senior Citizens

November 2014 – December 2014

- Designed and drafted a kayak cart for senior citizens,
- The cart was designed to help transport kayaks to the water from the car and vice versa.
- The cart can also be attached to the kayak while kayaking; eliminating the need to leave it unsupervised at the beach or requiring it to be stowed back in the car, making it much easier to use for seniors.

VOLUNTEER WORK EXPERIENCE**Little Champions Childcare Centre**

September 2010 – September 2015

Data Entry and Administrative Assistance

- Created new daycare forms
- Maintained important daycare files by cataloguing, organizing,
- Ensured files were up to date.

Little Champions Childcare Centre

May 2009

Special Events Volunteer

- Surrey Children's Festival – Play Center,
- Ensured a safe environment for children to play in which in turn kept parents satisfied.

AWARDS

KPU Dean's Honour Roll Spring

2015

KPU Dean's Honour Roll Fall

2014

Math4Me: Mentor of the Month

2014

PROFESSIONAL AFFILIATIONS

- Engineers and Geoscientists British Columbia (EGBC) – Student Member
- American Institute of Chemical Engineers (AIChE) – Member
- Society of Professional Engineers (SPE) – Member
- Oil and Gas Initiative – Executive Member

ACTIVITIES AND INTERESTS

- Snowboarding
- Fitness
- Hiking