

Jamie Ngai To Lo

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EDUCATION

University of British Columbia

Chemical and Biological
Engineering,
Graduation: May 2019

CGPA: 3.6/4.33 (79%, 'B+' average)
Honors: NSERC USRA

SKILLS

Strong fundamentals of **chemical engineering** with understanding in **electrical design** and **programming**.

Cad Design: SolidWorks, AutoCad, Inventor, EAGLECAD

Scientific Computing:
MATLAB, Python, Arduino

Programming
Ruby, Javascript HTML/CSS

ACTIVITIES

UBC Chem-E-Car,
Logistics, Electrical team

Chemical Engineering Undergraduate Student Club,
Webmaster

Shung Ying Kung Fu Club,
Assistant coach

Origins,
Parkour

AWARDS

Cadet Medal of Excellence,
Royal Canadian Air Cadets

First Place Poster: Chem-E-Car,
AIChE Student Conference-2016

First Place Presentation: Engineering Research Day-2016,
"What is Chem-E-Car"

WORK EXPERIENCE

Chemical and Biological Engineering

Course developer, Lab Technician

Undergraduate Assistant

Jun 2017 - Sep 2017

- Created an open-source flipped classroom course material in Python to push contemporary, interactive pedagogy.
- Collaborated with peers and supervisors to develop content that is both relevant and engaging.
- Saved \$200 by developing an interface to a dissolved oxygen probe using Python and Arduino instead of using Labview and a DAQ.
- Troubleshoot bioreactors, lab equipment, and spreadsheet macros for the laboratory course in the coming 2017-18 school year.

The Biofoundry at UBC

Research Assistant

Neuro-engineering Team

May 2016 - Sep 2017

- Developed a brain model for preclinical drug trials using induced pluripotent stem cells to create 3D neurospheres.
- Designed and created an apparatus to function with the targeted neurons while recording the interaction using Solidworks.
- Troubleshoot a 3-phase direct drive motor, and debugged the source code from Aerotech, saving \$1000 worth of consulting fees.
- Developed technical communications skills by contacting suppliers for products such as DAQs, and opto-mechanical equipment.

Chemical and Biological Engineering

Office Assistant

Administration

Jan 2016 - May 2016

- Organized and tracked financial spendings of professors through their speedchart system.

Kumon

Assistant instructor

Math and Reading Tutor

Jan 2011 - May 2016

- Guided K-12 students with an approachable, adaptive teaching style to ensure that individual students performed above their grade level.
- Coordinated a lesson plan for each student based on their strengths, weaknesses and pacing.

TECHNICAL PROJECTS

UBC Chem-E-Car Design Team

Logistics

- Managed the \$40,000 operating budget of the team, expanded team from 10 to ~40 students in 1 year.
- Created and developed the Electrical systems controlling the car by breadboard prototyping and EAGLECAD for PCB fabrication.

CHBE Student Council

Webmaster

- Collaborated with the student council to deliver pertinent content about academic activities, events, and conferences.
- Maintained the undergraduate council website using HTML and CSS.

CONFERENCES & PRESENTATIONS

Harvard National Collegiate Research Conference

Poster Presentation: 'Cerebro-Engineering Development of a Pre-Clinical Model of Neurodegeneration Toward Drug Delivery'

AIChE Student Conference-2016

Chem-E-Car competitor: 'Chem-E-Car'

Clean Energy BC Generate Conference-2016

Poster presentation: 'Zinc-nickel Flow cell'

Engineering Research Day-2016

Undergraduate presentation: 'What is Chem-E-Car'