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

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

SKILLS

Cad Design: SolidWorks, AutoCad, Inventor, EAGLECAD

Scientific Computing:
MATLAB, Python, Arduino

Programming:
Ruby, Javascript HTML/CSS, VBA

Other:
MS Office, MS Acces, MS Visio

ACTIVITIES

UBC Chem-E-Car,
Logistics, Electrical team

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"

INTERESTS

3D Printing,
Trusting Natural Recursion,
Reading (Fiction)

WORK EXPERIENCE

Fortress Advanced Bioproducts (formerly S2G) — Technical Group

Research Assistant, Database Developer — Jan 2018 – Sep 2018

- Contributed research towards alditol separation via chromatography for front end engineering design.
- Aided the head analyst in sample preparation, and product concentrations using HPLC and Dionex.
- Developed a laboratory information management system (LIMS) in MS Access saving at least $40,000

Chemical and Biological Engineering — Undergraduate Assistant

Course developer, Lab Technician — 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.

The Biofoundry at UBC — Neuro-engineering Team

Research Assistant — 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.
- Troubleshot a 3-phase direct drive motor, and debugged the source code from Aerotech, saving $1000 worth of consulting fees.

Chemical and Biological Engineering — Administration

Office Assistant — Jan 2016 – May 2016

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

Kumon — Math and Reading Tutor

Assistant instructor — Jan 2011 – May 2016

- Guided K-12 students with an approachable, adaptive teaching style to ensure that individual students performed above their grade level.

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 2107

- 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'