Esther Lin

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Education

University of British Columbia — **Vancouver**
3rd Year Engineering Physics, 85% — *2015–2020*

Experience

Ciena Corporation — **Ottawa**
Submarine Systems Engineer — *Jan.–Apr. 2017*
- Developed a client-server web application for network data acquisition and analysis with Ember.Js and Python.
- Designed and implemented processing algorithms for data from Ciena customers and field trials.
- Set up 5000 kilometer-long optical fiber test beds in Ciena Research and Development labs.

UBC MRI Research Centre — **Vancouver**
Research Assistant — *May–Aug. 2016*
- Measured Myelin Water Fraction and Inhomogeneous Magnetization Transfer in white matter tissue.
- Conducted processing on Nuclear Magnetic Resonance spectrums for power calibrations.
- Wrote scripts in Python for data analysis. Developed spectrometer pulse sequences in C.

UBC Centre for Heart Lung Innovation (UBC HLI) — **Vancouver**
Research Assistant — *Jun.–Aug. 2015*
- Investigated changes in macrophage populations induced by statins in patients with Chronic Obstructive Pulmonary Disease.
- Used colour segmentation to quantify cells for double-stained slides.
- Conducted analysis and data visualization in Excel.

BC Online School (BCOS) — **Vancouver**
Math Teaching Assistant — *2014 – 2015*
- Guided and marked assignments for grade 10 and 11 math courses, for a total of 200 students.
- Communicated concerns to students and instructors to establish a supportive learning environment

Activities and Projects

Autonomous Tape Following Robot
ENPH253: Introduction to Instrument Design — *Summer 2017*
- Designed and fabricated an autonomous robot that incorporates mechanical, electrical and software design.
- More info on our robot: `https://enph2020.github.io/robots/spectre/`

Member and Head of Mentorship
UBC Biomedical Engineering Student Team (UBC BEST) — *2015–present*
- Established the 2016 and 2017 Mentorship Program to educate 1st and 2nd year engineering students in UBC BEST.
- Created musical therapy devices that provide patients with sensory feedback.
- Finalist in the international 2016 RESNA Student Design Competition.

3rd Year Representative
UBC Engineering Physics Student Council — *May 2017–present*

Awards

Erich Vogt Research Award — **2016**
UBC Physics and Astronomy — *Vancouver*

Peter D. Pare Research Scholarship — **2015**
UBC Centre for Heart Lung Innovation — *Vancouver*

Dr. Bruce McManus Award for Best Oral Lung Presentation — **2015**
UBC Centre for Heart Lung Innovation, Summer Student Research Day Conference — *Vancouver*