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Esther Yung Huei Lin

Education

University of British Columbia **Vancouver, Canada**
Faculty of Applied Science, 3rd Year Engineering Physics Student *2015–2020*
Dean's Honour List, Engineering Physics Student Council, UBC Biomedical Engineering Student Team

Technical Experience

UBC Department of Electrical and Computer Engineering
Teaching Assistant for CPEN 221: Principles of Software Design *Sept.–Dec. 2017*
- Held weekly office hours to assist students with assignments and exam preparations.
- Taught monthly tutorials on version control, object-oriented programming, basic Java syntax, and data types.

Ciena Corporation R&D Headquarters
Submarine Systems Engineer Intern *Jan.–Apr. 2017*
- Developed a client-server application for field and lab operations with Ember.JS, JavaScript, HTML and Python.
- Utilized communication protocols (e.g. telnet, UDP) for hardware design, testing and debugging in the application development.
- Assembled 5000 km-long optical fiber test beds for Ciena's Submarine Systems labs by:
  - Testing and documenting the reflections, attenuations and lengths of all fiber spools.
  - Verifying the locations of amplifiers and equilizers and checking that their gains fell within the desired range.

UBC Solid-State NMR Group
Research Assistant, Interview Link *May–Aug. 2016*
- Developed spectrometer pulse sequences in C for NMR experiments.
- Wrote scripts in Python to automate the analysis of frequency spectrums and calculate signal to noise ratios.

Technical Projects

Autonomous Robot Competition (ENPH 253)
Electrical Lead, Project Link *Jun. – Aug. 2017*
- Created an autonomous tape-following robot that navigated a competition surface in a team of 4 students.
- Designed a central panel as an interface between the microcontroller and sensors to minimize external connectors.
- Filter circuits for IR detection were designed and prototyped using LTspice.
- Developed code for the control system, including PID control for the tape-following function of the robot.
- Assisted with the CAD and fabrication of mechanical parts. Used 3D printer, waterjet cutter and laser cutter for prototyping.
- Compiled a design document complete with SolidWorks drawings, circuit diagrams, and control system algorithms.

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

Volunteer Experience

UBC MRI Science Lab
Volunteer Research Assistant *Aug. 2017 – present*
- Rewriting MATLAB scripts in Python for code sharing and standardization between groups in the UBC MRI Research Centre.
- Currently developing a mathematical model for the exchange of magnetization between water pools in human brain.

Awards

Erich Vogt Research Award
UBC Physics and Astronomy *2016*

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

Conference Posters and Presentations

- S.F. Van Eeden, S. Miller , K. Hiraiwa , **E. Lin** , D. Ng , J.C. Hogg. Effects of Statins on Innate Immune Cells in Lung Tissues of Mild to Moderate COPD. Poster session presented at: American Thoracic Society International Conference; 2016 May 13-18; San Francisco, CA.