

# ELIZABETH O'SULLIVAN

3B Materials and Nanosciences

The University of Waterloo

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## SKILLS EXPERIENCE

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### Software Validus Research

C++ May 2017 - December 2017

html I was responsible for taking databases containing all of the coverage information from  
Python an insurer and modelling the data to find the probability, and the dollar value of  
SQL damage associated with, a large scale natural disaster.

Ran analyses to figure out the affect the updated USA fault lines had to the losses  
in specific regions of the USA as the result of an earthquake.

### Hardware

Cryogenics

Soldering and wiring

Vacuum systems

Machining

### The Gamma Ray Spectroscopy Group at ISAC, TRIUMF

January 2016 - May 2016

September 2016 - December 2016

Worked on the Spectrometer for Internal Conversion Electrons (SPICE) experiment.

### Other

Linux

Github

Labview

LaTeX

KiCad (PCB Design)

Designed and built a photodiode array including testing components, optimizing

the design, modifying simulations, designing the PCB to mount and wire components.

Wrote scripts in C++ to analyze data.

Wrote scripts in Python to control and monitor the vitals of the experiment.

### Sweat Free Apparel, Velocity Start-Up

June 2015-August 2016

Decided on necessary material properties for the product

Explained and recorded findings clearly for team members without science background

## ACHIEVEMENTS

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### 2017

Elected as Science  
Councillor for FEDS

Elected as Speaker  
for FEDS Council

### Kycia Group, The Faculty of Physics, The University of Waterloo

May 2015 - August 2015

Worked in a low temperature condensed matter physics research group developing  
a program in Labview to help run a cryostat, fixing and re-installing a helium liquefier  
Created methods to test individual components, machined (with a lathe and mill) and  
brazed new parts, tested to confirm previous problem had been correctly diagnosed  
and solved

### 2016

TRIUMF Student  
Symposium Winner

## PROJECTS

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### Website Design

September 2017 - December 2017

NSERC Undergraduate  
Student Research Award

Designed and built my own website using HTML, CSS, and JS.

### Co-Founder (and Exec) of MNS Society:

March 2017 - Present

Merit Scholarship  
(Entrance Scholarship)

I co-founded the MNS Society to ensure there would always be a place where future  
MNS students could find academic support, friends, and fun lab events.

### 2017, 2016, 2015, 2014

Dean's Honours List,  
Faculty of Science,  
University of Waterloo

### Councillor and Speaker:

May 2017 - Present

As Speaker I am responsible for creating the agenda, organizing our meetings,  
facilitating and maintaining order during meetings.