



# John Carpenter

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## Work Experience

### **Work Term at TRIUMF (FYSRE Award) (May 2019 – August 2019)**

- With Dr. Pietro Giampa on the development of 3D Silicon Photo Multiplier light detectors
- Gained knowledge about light detector technologies and their applications to current physics experiments, as well as the mechanics of p-n junctions in semiconductors
- Troubleshoot electronic boards and took data under vacuum cryogenic conditions

### **Junior Technician at UBC Computer Science (Co-op) (Jan 2020 – August 2020)**

- Performed general upkeep on the labs and server rooms in the UBCCS building
- Transferred faculty websites to the UBC page with a common theme using Jekyll

### **Host for The Collective You Photo Company (July 2018 – Present)**

- Manage large groups through interpersonal communication in high pressure situations.

### **Tutor for Grade 11 Physics Student (January 2019 – June 2019)**

- Communicate concepts and problem-solving steps to a younger student once weekly.

### **Choir Scholar at Pacific Spirit Church (September 2017 – June 2018)**

- Expected to come to rehearsals and services prepared to sing many new songs each week.

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## Relevant Skills

### **Languages:**

English - Fluent

French - Conversant

### **Coding Languages:**

Java - Very Strong

Python - Competent

C++ - Will learn this term (CPSC 221)

### **Other Computer Skills:**

- Git – experienced in version control procedures
- Excel – adept at taking and analysing data using formulas and graphs
- Familiar with navigating file systems through terminal systems) and running a virtual machine on windows
- Made a chess program with GUI, type hierarchies, data permanence, unit testing, and more (see github for details on the project)

### **Technical Skills:**

- Built an AM Radio Receiver from scratch in PHYS 219 course
- Experience using oscilloscopes, digitizers, digital multimeters, function generators, and Arduino boards for data taking, troubleshooting, and circuit building.
- Able to run tests in and maintain a vacuum cryogenic system

**Other Skills:**

- Fast learner with experience learning coding languages and new physics on the job
  - Good presentation skills obtained through student talks at TRIUMF and the Presentation Skills Workshop at UBC
  - Positive attitude even while balancing heavy course and work loads
  - Strong communication and leadership gained through experience as spirit captain on high level ultimate teams and section leader in choir ensembles
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**Education**

**University of British Columbia;** Vancouver, British Columbia

**2018 – Present**

2<sup>nd</sup> Year Bachelor of Science in the Combined Computer Science and Physics Major

**Relevant Courses:**

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| - PHYS 200: Relativity and Quanta                | - MATH 217: Multivariable and Vector Calculus    |
| - PHYS 203: Thermal Physics I                    | - MATH 221: Matrix Algebra                       |
| - PHYS 216: Intermediate Mechanics               | - CPSC 210: Software Construction (Java)         |
| - PHYS 229: Intermediate Experimental Physics II | - CPSC 213: Introduction to Computer Systems     |
| - ENGL 112: Strategies for University Writing    | - CPSC 221: Basic Algorithms and Data Structures |
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**Awards & Accomplishments**

**Eric Vogt First Year Summer Research Experience (FYSRE) Award (2019)**

Awarded to three strong and dedicated first year physics students at UBC after written application and interview process. This award provides students with research contacts at TRIUMF and UBC to work for a summer in a lab setting.

**John Procyk Point Grey Mini School Award (2018)**

Awarded to a strong science student who contributed significantly to life in the PGM School. I earned this award for participating in the leadership class and being Vice President for the Mini student council, while being a strong and committed student in the sciences.

**Point Grey Secondary Academic Medal (2018)**

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**Interests**

**Music** – I have learned many instruments (all types of saxophones, clarinet, oboe, trombone, trumpet, bass, voice) and performed in many classical ensembles, jazz ensembles, and choirs. These include province-wide auditioned jazz bands for the BCMEA conference and Vancouver Jazz Festival and an auditioned singing scholarship at Pacific Spirit Church.

**Ultimate Frisbee** – I played on Junior club teams which attended the Canadian Ultimate Championships for 5 years, including playing on BC's top team in 2017 and 2018 (acting as spirit captain on both teams) and winning a silver medal at the tournament in 2018. I am currently keeping my interest in the sport going by playing on the UBC team which travels to US Nationals, among other tournaments.

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**References**

Reference(s) can be provided upon request

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