

# COLE PETERSON

✉ colpeterson@gmail.com  
☎ (778)-677-0146  
📍 Victoria, BC

Canadian national team runner  
with expertise in machine  
learning looking to advance  
career in tandem with training for  
the 2020 Olympics.

## Skills

Public Speaking  
Problem Solving  
Writing  
Commitment to Excellence

### PROGRAMMING LANGUAGES

Python  
Java  
C  
Bash  
MATLAB  
Standard ML  
Scala  
SQL  
Lua  
LaTeX

### PROGRAMMING SKILLS

Machine Learning  
Neural Networks  
Object-Oriented Programming  
Complexity Analysis  
Functional Programming  
Git/Version Control  
Debugging  
Test Driven Development  
Digital Signal Processing  
Data Mining  
Bitwise Optimizations  
Artificial Intelligence

## Education

University of Victoria  
B.Sc. Computer Science 2016  
M.Sc. Computer Science 2019  
4 time Academic All-Canadian, Dean's List, 7.59 GPA

Sept. 2011 to Apr. 2019

## Employment

University of Victoria  
Researcher/Lab Instructor

Researched language modeling, model interpretability, data mining. Guest lecturer in NLP and Data Mining courses. Taught and developed new lab materials for Data Mining course. Aided with creation of assignments and grading of assignments and exams.

Victoria, BC

Sept. 2016 to Apr. 2019

AbeBooks

Software Engineering Co-Op

Worked on Search Team. Improved computational performance of internal update processes. Implemented exact search on German site.

Victoria, BC

Sept. 2015 to Dec. 2015

## Projects

Generating Rhyming Poetry Using LSTM Recurrent Neural Networks

My master's degree thesis focused on training a recurrent neural network to learn, and then generate English language poetry which adheres to form.

Hip-Hop Instrumental Extractor

Adaptation of existing sound source separation algorithms, which specifically exploits hip-hop's often repetitive instrumental structure to better separate instrumentals from vocals.

Poet Admits//Mute Cypher: Beam Search to find Mutually Enciphering Texts

Inspired by a work of poetry, this paper finds an efficient algorithm for finding substitution ciphers which can be used to write "mutually enciphering" texts. Presented at Empirical Methods for Natural Language Processing 2016 (EMNLP) in Austin, TX

Interpreting Word-Level Hidden State Behaviour of Character-Level LSTM Language Models

Supervised undergraduate student project interpreting the behaviour of language models. Presented at EMNLP BlackboxNLP workshop 2018.

Homewrecker Hot Dogs — The Hillbilly Hip-Opera

Co-Author/Director/Actor of a play, performed entirely in rap, which showed at the Edmonton and Victoria International Fringe Festivals

## Awards

University of Victoria · President's Cup

Apr. 2017

The President's Cup is given annually to the outstanding student-athlete in fourth or fifth year who best combines scholastic achievement and athletic ability.

FISU World University Games; Taipei, Taiwan · 10th Place - 1500m

Aug. 2017

Held every two years, the FISU championships are the premier international multi-sport games, which are open to athletes registered in post-secondary school.

Bronze National Senior Championships 1500m

Finished just behind Canada's two 2016 Olympians in the event, including the 10th place finisher in Rio.

CanWest Athletic Conference · Canada West Track Athlete of the Year

Mar. 2017

National Collegiate Champion 1500m and 4x800m relay.

University Of Victoria · Graduate Student Fellowship

Sept. 2016

\$27,000 over two years

## Volunteering

UVic Vikes Men's Cross Country and Track Team · Captain

Sept. 2014 to Apr. 2017

USports National Cross Country Championships · Master of Ceremonies, event banquet

Sept. 2017

Hershey's Youth Track and Field Games · Chaperone  
Hershey, Pennsylvania

Aug. 2014