Kaleb Ruscitti

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EDUCATION

BSc. in Mathematical Physics
Expected Aug. 2021 | University of Waterloo
Term Dean's List (All Terms)
Cum. Average: 82%

LINKS

Github:// **kalebruscitti**
LinkedIn:// **kaleb-ruscitti-b4a2659b**
Personal: **kaleb.ruscitti.ca**

COURSEWORK

UNDERGRADUATE:
Intro to Differential Equations
Linear Algebra
Calculus III
Optics
Group Theory
ONLINE:
Information Theory
HTML/CSS

SKILLS

TECHNICAL
Programming:
Python • C++ • LaTeX • HTML/CSS
Industry:
Analog Circuits • Optics • Experimental Design • Numerical Computations
Certifications:
WHMIS • Compressed Gas and Cryogenics
SOFT
Languages:
English (Native) • French (CEFL B2) • Mandarin (HSK 4)
Workplace:
Conflict-Resolution • Team-Leadership • Graphic and Presentation Design

EXPERIENCE

INSTITUTE FOR QUANTUM COMPUTING | Research Assistant (Volunteer)

Jan. 2017 - April 2017 | Waterloo, ON

- Undergraduate Research Assistant working on the Quantum Information with Trapped Ions team under Dr. Rajibul Islam.
- Designed control circuitry for the lasers used for trapping ions.
- Researched various concepts relating to physical and quantum optics, and presented findings and ideas to the group.

PROJECTS

ASTEROIDS AI | Evolution-based Neural Network

Personal, June 2017

- Using a basic implementation of the Neural Evolution using Evolving Topologies (NEET) method, designed an AI that evolved to play 1979 Atari game Asteroids.
- Programmed using Python 3, to interact with a predownloaded Python port of the original game.

EMBEDDED PATH TRACKER | Track and Visualize Flight Paths

ECHacks, Nov. 2016

- Connected an accelerometer to an Arduino which can be embedded into an object to track its movements in real time.
- The path would be 3D-graphed on a computer screen, and location and acceleration would be saved into CSV files.
- Used C++ on the Arduino, and Python to visualize the data.

CLASSICAL GRAVITATION SIMULATION | Python Simulation

Personal, July 2015

- Over a week, wrote code in Python that simulates the motion of bodies in a solar system due to Newtonian gravitation. The program also displays a graphical visualization of the motion that updates in real time.
- Uses Python 2.7 with the Pygame package for visualization and Tkinter for the GUI.

AWARDS

2017	department	Confucius Institute Scholarship
2016	top in school	Euclid Mathematics Contest
2016	international finalist	DECA International, in Apparel and Accessories Marketing
2016	regional	Rotary Club Scholarship to an Outstanding Student
2016	regional	Kiwanis Club Barrie Scholarship to a Student Leader
2016	high-school	Silver Award for Academic and Extracurricular Excellence
2015	4th overall	DECA Ontario, in Public Relations Project