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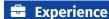
</> C++, Python, Java

Education

Bachelor of Science (BSc) Honors in Computer Science | University of Calgary Bachelor of Science (BSc) Honors in Biochemistry | University of Calgary

Sep. 2015 - Jun. 2021 Calgary, Alberta, Canada

- > First Class Honors | Computer Science Major GPA: 4.00/4.00 | Biochemistry Major GPA: 3.68/4.00 | Overall GPA: 3.85/4.00
- > Courses: Algorithms and Data Structures, Distributed Algorithms, Information Theory, Operating Systems, Networks, Security.



Undergraduate Researcher (Project: Post-Quantum Isogeny-Based Cryptography)

Sep. 2020 - May 2021

Department of Computer Science, University of Calgary

Calgary, Alberta, Canada

- > Investigated optimizations to a cryptographic protocol by analyzing over 50 publications to recover two alternative algorithms.
- > Spearheaded experiments to compare and enhance the run time of computations by initiating the development of Magma code implementing the studied cryptographic protocol and its two alternative algorithms.

Teaching Assistant (Course: Operating Systems)

Sep. 2020 - Apr. 2021

Department of Computer Science, University of Calgary Calgary, Alberta, Canada

- > Led tutorials of 45-55 students by creating presentations and C/C++ programming exercises for 96 one-hour tutorials.
- > Assessed and provided constructive feedback for over 200 C/C++ assignments by testing and debugging students' code.
- > Streamlined the evaluation of assignments by 30% in time, by automating and multithreading the execution of test scripts and writing bash scripts to run on each assignment.

Software Developer May 2020 - Aug. 2020 VIKAMI Canada Calgary, Alberta, Canada

- > Consulted with business owners and deployed an e-commerce website built on WordPress, using PHP, JavaScript, HTML, and CSS; building the business' online presence and resulting in a 20% increase in online sales in the first month.
- > Increased the accuracy of shipping estimates by 10% by implementing algorithmic improvements, while keeping scalability in mind.

Summer Undergraduate Researcher (Project: Effects of Heavy Metals on Lipids)

May 2018 - Aug. 2018

Department of Biological Sciences, University of Calgary

Calgary, Alberta, Canada

- > Reduced time spent on manual data parsing by 80% by using Python, Excel, and MATLAB to automate data entry and plotting.
- > Awarded with a Natural Sciences and Engineering Research Council of Canada Undergraduate Summer Research Award.

Projects

More projects and details: michellevynguyen.com#portfolio

dpfplusplus - A C++ Implementation for Cryptographic Distributed Point Functions

Mar. 2021 - Apr. 2021

michellevynguyen.com/portfolio/dpfplusplus.html

Calgary, Alberta, Canada

- > Maintained and documented the to-be open source codebase of a cryptographic primitive's C++ implementation.
- > Enhanced user-friendliness by establishing three tutorials on how to get started with the codebase, using code examples.

uScholar - A Web Application for Academic Journal Submissions

Feb. 2020 - Apr. 2020

• github.com/jonsantos/uScholar | • michellevynguyen.com/portfolio/uscholar.html

Calgary, Alberta, Canada

- > Collaborated with an agile team to create a web application for academic journal submissions. Built using JavaScript and Firebase.
- > Optimized database efficiency by designing the structure to reduce nesting and flatten data structures.

Jumpy Man - A Desktop Platformer Game

Jul. 2019 - Aug. 2019

🖸 github.com/michelle-n/JumpyMan | 😵 michellevynguyen.com/portfolio/jumpyman.html

Calgary, Alberta, Canada

- > Designed and constructed a desktop game in 6-weeks while learning Java, with GUI built using JavaFX.
- > Improved scalability by restructuring 25 classes to reduce coupling and increase cohesion.

Skills

Proficient with: Developing in C++, Python, and Java; working in Unix, Linux, and Windows environments; using Git version control. Previous experience with: Developing in C, Assembly; parallel programming and multithreading; packet analysis with Wireshark. Knowledge of: Virtual memory, scheduling, IPC, POSIX, gdb, valgrind, UNIX scripting and shells, bash, TCP/IP, UDP, socket programming, REST services, Jenkins, Docker, Kubernetes, virtual machines on Google Cloud Platform, NoSQL databases, agile methodologies.

Clubs and Interests

Information Security Club | University of Calgary - Member Competitive Programming Club | University of Calgary - Member Science Mentorship Program | University of Calgary - Mentor Cycling Team | University of Calgary - Founder/President

Mar. 2020 - Apr. 2021 Sep. 2019 - Apr. 2021

Sep. 2017 - Apr. 2019

Sep. 2016 – Apr. 2018