Michelle Vy Nguyen

michellenguyen.vy@gmail.com
+1-587-700-8498

michellevynguyen.com
github.com/michelle-n
linkedin.com/in/michellevynguyen
</> C++, Python, Java

Education

Bachelor of Science (BSc) Honors in Computer Science | University of Calgary Sep. 2015 – Jun. 2021
Bachelor of Science (BSc) Honors in Biochemistry | University of Calgary *Calgary, Alberta, Canada*

- Computer Science Major GPA: 4.00/4.00 | Biochemistry Major GPA: 3.68/4.00 | Overall GPA: 3.85/4.00
- Courses: Data Structures, Distributed Algorithms, Cryptography, Security, Information Theory, Operating Systems, Networks

Experience

Honors Research Student (Topic: 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.
- Progressed 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: Principles of 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 test scripts to run on each assignment.

Software Developer May. 2020 – Aug. 2020
VIKAMI Canada *Calgary, Alberta, Canada*

- Consulted with the 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.

Honors Research Student (Topic: Surface-Erosive Polymers for Stem Cell Growth) Sep. 2018 – Apr. 2019
BioMEMS and Bioinspired Microfluidic Laboratory, University of Calgary *Calgary, Alberta, Canada*

- Researched the potential of five polymer mixtures to target the delivery of protein growth factors, by analyzing data from protein structure and toxicity experiments using Igor Pro, Excel, and MATLAB.

Summer Undergraduate Researcher (Topic: 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 automating data entry and plotting using Python, Excel, and MATLAB.

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 codebase of a cryptographic primitive's C++ implementation, using C++ and Doxygen.
- Enhanced user-friendliness by establishing three tutorials on getting 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 a team to tackle a web application for academic journal submissions. Built using JavaScript and Firebase.
- Optimized efficiency by designing the database structure to reduce nesting and flatten data structures.

Jumpy Man - A Desktop Platformer Game July. 2019 – Aug. 2019
github.com/michelle-n/JumpyMan | *michellevynguyen.com/portfolio/jumpyman.html* *Calgary, Alberta, Canada*

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

Skills

Proficient with: Developing in C++, Python, and Java; working in Unix/Linux environments; and using Git version control.
Previous experience with: Developing in C, ARM Assembly, Haskell, HTML, CSS, JavaScript, PHP, Magma, and MATLAB.

Clubs and Interests

Information Security Club | University of Calgary - Member Mar. 2020 – Apr. 2021
Competitive Programming Club | University of Calgary - Member Sep. 2019 – Apr. 2021
Science Mentorship Program | University of Calgary - Mentor Sep. 2017 – Apr. 2019
Cycling Team | University of Calgary - Founder/President Sep. 2016 – Apr. 2018