

Christopher Molloy

Cybersecurity Researcher

DETAILS

INFO

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LINKS

[GitHub](#)

[L1NNA Laboratory](#)

SKILLS

Python		6y Experience
Java		5y Experience
HTML/CSS/JavaScript		8y Experience
R		3y Experience
MySQL		3y Experience
Git		6y Experience
PHP		3y Experience
Linear Algebra		6y Experience
Algebraic Structures		2y Experience
Calculus		6y Experience
C++		3y Experience
C		2y Experience

REFERENCES

Dr. Steven Ding
L1NNA Research Laboratory
ding@cs.queensu.ca

Dr. Jeff Wrana
The Lunenfeld-Tanenbaum Research Institute
wrana@lunenfeld.ca

PROFILE

I am a graduate student currently researching adversarial learning at Queen's University in Kingston, Ontario at the L1NNA Laboratory. This research area reflects my love of mathematics, which is also why I chose to focus on math and statistics while achieving my undergraduate degree in Computer Science at Queen's. Throughout my undergraduate I had the pleasure of working in many different environments, from house construction to robotics programming. I have a wide variety of skills that I use to solve all problems that I see in front of me.

EDUCATION

Master's of Science, Queens University

Sep 2020 – Present

GPA: 4.24/4.3

Kingston

I am currently researching adversarial learning on malware. More specifically, if reinforce multi-agent environments can be used for malware generation and detection.

Relevant Coursework: Data Mining, Neural Networks, Topics in Cybersecurity, Deep Learning

Bachelor's of Computing in Mathematics, Queens University

Sep 2016 – April 2020

Kingston

Relevant Coursework: Linear Data Analytics, Software Architecture, Advanced Calculus, Applied Methods of Statistics, Statistical Computing, Time Series Analysis, Data Structures, Algorithms

Dean's Honor List: 2019-2020

PUBLICATIONS

C. Molloy, Z. Mansour, S. Ding, "Adversarial Learning on Malware" in *The Encyclopedia of Machine Learning* [In-Press]

EMPLOYMENT HISTORY

Research Member, L1NNA Research Laboratory

Jan 2020 – April 2020

Kingston

Selected Employment Experience: I implemented an image signature feature to the state-of-the-art malware detection system JARV1S. These Image signatures are what allow JARV1S to **quickly query its database of millions of malware samples** for similar software.

Summer Researcher, The Lunenfeld-Tanenbaum Research Institute

Apr 2019 – Aug 2019

Toronto

Selected Employment Experience: I designed a php enabled website for storing information on the hundreds of thousands of tubes stored in the labs freezer system. **This website allows lab technicians to change information about stored tubes without needing the assistance of an engineer.**

Software Engineer Intern, Vouchr

May 2018 – Aug 2018

Toronto

Laborer, J.F. Brennan Custom Homes

Apr 2017 – Aug 2017

Toronto

Back of House Assistant, Salt & Pepper Catering Co.

Jul 2016 – Aug 2016

Toronto

LANGUAGES

Python

6 years of experience

I was formally taught python during my undergraduate career at Queen's. I have utilized Python throughout my undergraduate for school assignment as well as personal projects, such as a web app that uses python and IBM Watson to analyze the sentiment of news articles. As well as this, Python is my preferred language for all graduate AI and cybersecurity research.

Java

5 years of experience

Java was the first object-oriented language that I learned. During high school I was formally taught Java which cultivated in visualizing the Mandelbrot set. Since I was taught Java, I have used the language to complete data structure related assignments during my undergrad as well as using Java for database management while at my internship at Vouchr.

HTML/CSS/JavaScript

8 years of experience

Along with Java I was taught basic web programming in high school. I have used these web dev skills for countless personal projects, such as a real time stock calculator for online games. As well as personal projects I have needed develop websites for undergraduate projects and for my internships at Vouchr and The Lunenfeld-Tanenbaum Research Institute.

R

3 years of experience

I was required to learn R as a part of my statistics requirement for my undergraduate degree.

MySQL

3 years of experience

I was formally taught MySQL as well as database management during my undergraduate at Queen's. I was required to manage MySQL related databases for my internships at Vouchr and The Lunenfeld-Tanenbaum Research Institute.

Git

6 years of experience

I was initially introduced to git while I was in high school. Please refer to my [GitHub](#) for my project history.

PHP

3 years of experience

I was formally taught PHP during my undergrad to go along with my MySQL in my database management class. I designed a PHP enabled website while at my internship at The Lunenfeld-Tanenbaum Research Institute.

C++

3 years of experience

During high school I was given the opportunity to learn basic Arduino programming through my school. Arduino "sketches" are written in C++. Projects include designing a fully functional USB game controller and designing a robot that would autonomously move around without hitting walls.

C

2 years of experience

I was required to use C for assignments related to computer architecture during my undergraduate career.