

VINCENT MACRI

Mathematician

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github.com/vincentmacri

git gitlab.com/vincentmacri

in linkedin.com/in/vincent-macri

SUMMARY OF QUALIFICATIONS

- Proficient in Java, Python, C, C++, HTML, CSS, C#, Visual Basic, LaTeX, Racket, JavaScript, and R
- Versed in Linux, git, Spring Boot, Python Flask library, Python Sympy library, Java libGDX library, Android Studio, Metabase, Jenkins, and .NET
- Certifications: Cisco Networking Academy (IT Essentials), Focus on Information Technology (Software Design and Development; and Network Systems and Operations with Industry Seal)

EXPERIENCE

Undergraduate Research Assistant

University of Waterloo

May 2019 – August 2019

Waterloo

- Researched post-quantum cryptography for the Department of Combinatorics and Optimization, supervised by Professor David Jao
- Reimplemented cryptography software in C using twisted Hessian elliptic curves
- Studied elliptic curve isogeny cryptography
- Received Undergraduate Student Research Award from the Natural Sciences and Engineering Research Council of Canada valued at \$4500

Backend Developer

Mavennet

May 2019 – August 2019

Toronto

- Performed core Java backend development on QCAD, a digitalized Canadian dollar on the Ethereum blockchain; and VivoPago, a service that pays users in cryptocurrency for watching advertisements
- Designed, implemented, and supported API for QCAD and VivoPago projects using Spring Boot
- Designed and implemented a secure user management system
- Created business intelligence visualizations of user behaviour with Metabase
- Set up and maintained Jenkins continuous integration software

Game Programming Instructor

Real Programming 4 Kids

September 2017 – August 2018

Toronto

- Taught math-intensive game programming lessons to classes of 1–4 students
- Led advanced C++ course in which students built a 2D game engine
- Modified curriculum to enhance learning of individual students

Computer Programming Team

William Lyon Mackenzie C.I.

September 2014 – June 2018

Toronto

- Organized the first two all-girls programming competitions in the Toronto District School Board, with approximately 100 annual competitors
- Gained problem-solving, teamwork, and leadership skills through competing in programming competitions

PROJECTS

Integral Calculator

github.com/vincentmacri/MCV4U0-ISP

- Developed backend of web application for teaching math students about integrals
- Used Flask and Sympy Python libraries
- Created API and wrote documentation for all endpoints
- Collaborated to integrate API into frontend application

Amazing Maze

github.com/vincentmacri/AmazingMaze

- Coordinated a team of three developers to create an original educational game using Java
- Designed and implemented algorithm for procedural generation of game levels
- Organized, delegated tasks, performed code reviews, and developed core gameplay
- Used the libGDX game library
- Wrote modular, well-documented code

STRENGTHS

Critical thinking

Problem solving

Research

Teaching

DevOps

Data visualization

Cybersecurity

EDUCATION

Candidate for Bachelor of Math, Honours

University of Waterloo

September 2018 – April 2023

- In first term of third year
- Double major in Pure Math and Combinatorics and Optimization

MaCS Program

William Lyon Mackenzie C.I.

September 2014 – June 2018

- Graduated high school from a STEM program
- Completed enriched math, technology, English, and science courses