

Youssef Mikhail

mikhaily@mcmaster.ca | 647-982-0663 | linkedin.com/in/youssef-mikhail/ | youssef-mikhail.github.io

HIGHLIGHTS OF QUALIFICATIONS

- Passionate about software, computing and technology
- Diverse experience in a variety of programming languages and projects, many of which are open sourced on GitHub
- Have assumed various leadership roles and worked with various teams

EDUCATION

Bachelor of Applied Science, Computer Science (Co-op)

Expected Graduation: April 2022

McMaster University, Hamilton, ON

- Currently in level 3 of a 4-year program
- Current GPA of 11.8 on a 12-point scale
- Pursuing a Minor in Business

Relevant Courses

- *COMPSCI 3DB3: Databases* (Currently in progress)
 - Gained a good understanding of relational databases and the different methods used to model them, as well as using SQL-based systems

TECHNICAL SKILLS

Advanced	Experienced in using UNIX terminal and Bash, Linux, Java, C++, and Python
Proficient	Version control (Git), Objective-C, Haskell, MIPS Assembly, x86 Assembly
Prior Experience	Reverse-engineering and assembly analysis, SQL, C, Make, Swift, Elm, HTML/CSS, JavaScript, Django, TCP Packet inspection

TECHNICAL EXPERIENCE

iOS Jailbreak Tweaks: VideoHUD, WakeTunes, and several others

- Developed numerous jailbreak tweaks for iOS which modify or add functionality to the device
- Reverse-engineered and analyzed binaries and frameworks in iOS to target specific classes in order to target methods to hook
- Regularly maintained the software to include bug fixes and support new versions of iOS
- Independently created and maintained a Debian repository hosted on GitHub pages
- Listened to user feedback from the community in order to fix software issues

Online Multiplayer Battleship Game

- Created a multiplayer battleship game with Elm as the frontend and Django as the backend
- Used Django's relational database models to keep track of active sessions and users

StudyMates (iOS App)

- Developed an app that was created using Swift at Starterhacks 2019, a beginner-oriented hackathon
- Gained experience with the app development process, as well as pitching and selling a product

Penetration Testing Experience

- Performed ARP poisoning attacks over own Wi-Fi network
- Sniffed packets over a network and inspected their contents, including headers, type, and body
- Used DNS spoofing to redirect target to fake login phishing page (on a test machine)
- Used gdb to disassemble a binary and circumvent security measures by patching register values

Raspberry Pi Robot

- With a team of four, designed and built a SumoBot with motors, light sensors, and external button
- Using a breadboard and a GPIO connector, used Python to send signals through GPIO pins to control and receive information to and from components

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VOLUNTEER EXPERIENCE

Stouffville Codeathon Mentor

August 2020

- Mentored at Stouffville Codeathon, an online hackathon organized for young students
- Organized and ran various workshops on Python and Git

Leader in Training

July 2016

Grace Camp, Markham, ON

- Collaborated with colleagues to organize daily activities for children
- Accepted responsibility for the supervision of children

Muskoka Woods Leader

September 2017

- Coordinated, ran, and helped supervise an overnight trip for new high school students

DeltaHacks V Volunteer

January 2019

- Volunteered at DeltaHacks V, a hackathon hosted at McMaster University
- Assisted with tasks such as keeping the event organized, setting up the event, or assisting the attendees who may require technical assistance with their hacks

EXTRACURRICULAR ACTIVITIES

President. McMaster Computer Science Society

April 2020 – Present

- Worked with other student groups and faculty staff to organize events, as well as advertise them to students
- Created year plans and budgets for student-run events
- Managed and coordinated tasks for the rest of the executive team

Elected Position. Computer Science Rep in McMaster Engineering Society

Mar. 2019 – Mar. 2020

- Represented and communicated the needs and concerns of Computer Science students at McMaster
- Voted on important decisions made by the McMaster Engineering Society on behalf of students in the Faculty of Engineering

Member. McMaster Competitive Programming Junior Team

October – November 2018

- With a team of four, a variety of different types of questions are solved using reasoning and problem-solving skills, as well as appropriate efficiency-oriented algorithms where needed
- Competed in the East Central North America International Collegiate Programming Competition (ICPC) against other universities in North America, using only one computer per team

Attendee. Hack the Valley 3 at University of Toronto Scarborough

February 2019

- Worked with a team to create a "Top 10" YouTube video generator
- Learned how to use various Google APIs, scraped webpages, and used speech analysis tools such as Google's Speech Synthetic Markup Language for computer generated speech

Attendee. Hack the North 2019 at University of Waterloo

September 2019

- Worked with a team to create a progressive web app
- Developed backend using Django, and learned about Node.js and React frameworks

WORK EXPERIENCE

Undergraduate Teaching Assistant at McMaster University

September 2020 - Present

- Assisted in teaching a second-year discrete math course with a focus on mathematical proofs
- Led tutorials, held office hours, and provided input in the way the course is delivered to students

Office Assistant at Planet Management

May – August 2019

- Set up devices and computers for the company, such as printers, computer networks, and emails
- Designed and maintained the company's website

Assistant at Mount Joy Pharmacy

June – August 2019

- Assisted with the labelling of medication and disposal of expired medication
- Interacted with customers as a cashier