

Varunan Varathan

(416) 558-9723 • varatv3@mcmaster.ca • <https://github.com/varunan-vara> • <https://www.linkedin.com/in/varunan-varathan>

SUMMARY OF QUALIFICATIONS

Proactive and Motivated Computer Engineering & Finance Minor Candidate at McMaster University who is passionate about microprocessor design, machine learning algorithms, robotics, and embedded devices.

Professional experience using object-oriented languages, artificial intelligence applications, web/mobile app development, assembly programming and backend development

PROFESSIONAL EXPERIENCE

Software Developer | H.H. Angus & Associates Ltd.

May 2022 – Sept 2023

- Worked with colleagues in the digital services team in a dynamic environment to create technical solutions to healthcare and engineering applications using cloud infrastructure and introducing software-based workflow management tools
- Led project to transition from COTS & On-Premises Document Management Solutions to Cloud-Based In-House Software
 - Created various programs in **Python/C#** for **Autodesk** Environments - reduced export & “clean-up” time by 95%
 - Worked with **AWS SageMaker** and **S3** to connect a **.Net** based frontend application to speed up internal development of document and drawing files using text generation and data analysis based on **artificial intelligence**

Research Analyst | Noolaham Foundation

July 2020 – Sept 2020

- Researched the impacts of the Sri Lankan civil war on literacy rates with **Data Analysis Tools & Webscraping Tools**
- Converted PDF primary sources into spreadsheets and visualizations | Created an algorithm that was able to accurately retrieve data from pdf documents and make interactive visualizations using Pandas, NumPy and Plotly

PROJECTS & EXTRA-CURRICULAR ACTIVITIES

MacChangers - Economic Growth, Environmental Sustainability, and Prosperity

Sept 2021 – Apr 2022

- Researched economic and financial challenges in the Greater Hamilton Region and potential solutions in teams of four
- Took initiative in interviewing local businesses and analyzing primary sources to understand the city’s demographics
- Created a mobile/web interface that makes environmental incentives and emission data accessible to Hamilton residents

DeGroote Finance and Investment Council (DFIC) – Quant Analyst

Nov 2021 – Present

- Working in the Quant Team at DFIC in areas of Risk Management and Data Analysis to study market trends
- Using software tools like Python and QuantConnect to assess market trends and manage assets

Surgical Tool Sterilization System (Autodesk Suite, Python)

Dec 2021

- Designed a durable and affordable device with a Raspberry Pi and a robotic arm that stores, sterilizes, and retrieves surgical equipment, ensuring proper cleanliness and ease-of-use for hospital staff and technicians

Peregrine Bot (Python, AWS)

- A cloud-based tool for Social Media Moderation that assesses links and files for Malware and unwanted URLs
- Used tools such as Firebase and React to create a Dashboard User Interface to visualize data and alter administrative settings

EDUCATION

McMaster University | Bachelor of Computer Engineering (GPA: 9.4/12 or 3.5/4.0)

Expected April 2025

- Working towards a **Major in Computer Engineering & Society (B.Eng)** with a **Minor in Finance**
- Courses taken: Circuits, Logic Design, Algorithms, C/C++, Probability & Statistics, Data Structures and Engineering Design

SKILLS

- Software Development Knowledge in:
Python + Pip/Libraries | C/ C++ | JavaScript (HTML/CSS), TypeScript, NodeJS | C# | Quartus II/Verilog | Assembly
 - Experience in Engineering/Design & Project Management Tools such as:
Figma | AWS SageMaker/Lambda | Autodesk AutoCAD/Revit/Inventor | GitHub | VS Code | Microsoft Excel/PowerBI
 - Leadership experience through Toastmasters International’s Public Speaking Initiative to facilitate access to communication and team-building events at the H.H Angus Workplace
 - Teamwork and Collaboration skills built in design project groups at 1P13 McMaster Design Studio to create prototypes and simulations using software development and 3D CAD Design
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