

Ayan Hafeez

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Technical Skills

Languages: C++, C, Python, Javascript, HTML/CSS, Racket, PHP

Frameworks / Packages: React, Node.js, Express, Bootstrap, BeautifulSoup4

Developer Tools: Git, Postman, MongoDB, MySQL, Visual Studio, Heroku, LaTeX

Experience - in

Full Stack Development Intern

July 2021 – July 2021

Digitera Interactive

Ottawa, ON

- Developed a backend API using Apache, PHP and MySQL for an event management web application
- Implemented testing routines and quality control measures for the backend framework using Postman and Git
- Integrated API requests and data flow management into a VueJS frontend in a maintainable and scalable manner
- Optimized database queries and server endpoint code to ameliorate overall performance of the web app

Lead Software Developer

Apr. 2020 – July 2021

2381C VEX Robotics

Ottawa, ON

- Led the design and development of a codebase for autonomous robot control in the VEX EDR competition
- Developed robot odometry and motion profiling using PID controllers and mathematic principles in C/C++
- Won the international programming skills challenge for proficient codebase design and excellent implementation

Co-President

Apr. 2020 – July 2021

SET Foundation NPO (Ottawa Division)

Ottawa, ON

- Served as co-president for the SET Foundation NPO; oriented towards students in STEM industries
- Spearheaded the organization of numerous events including hackathons, conferences and virtual panels
- Managed a team of 9 executives, overseeing financial, logistical, and internal administrative affairs

Projects - 🌐

CIFAR-10 Image Classifier | Python, Tensorflow, Keras, Various packages

Jan. 2022

- Programmed a multi-class image classifier and trained it on the CIFAR-10 dataset for the UWARG-CV bootcamp
- Constructed CNN using a modified VGG block structure and automated hyperparameter tuning using KerasTuner
- Tested validity of classifier and traced/plotted accuracy and loss metrics during training

Qi Programming Language Interpreter | C/C++, Github/Git

June 2021

- Developed a fully featured five-stage interpreter for a custom programming language using C and C++
- Devised lexing, tokenizing, parsing, AST, execution and memory management modules with a partner
- Implemented support for typing, data structures, control flowfunctions, I/O, and built-in object methods

CCScraper | Python, BS4, SQLite

Apr. 2021

- Designed a web scraper app to monitor hardware prices and track them via pulling postings to a local database
- Created a CLI for user parameter input during scraping and parsing process for [canadacomputers.com](#)
- Linked driver script to a local SQLite database and automated relevant CRUD operations on scrape

Quikslide - AI Presentations | Python, Flask, SQLAlchemy, HTML/CSS/JS, Various APIs

Jan. 2021

- Developed a website that creates autonomous slideshow presentation generator from speech
- Implemented payload summarization via NLTK and automatic slide generation with the Google Slides API

Education

University of Waterloo

Waterloo, ON

Bachelor's of Computer Science - BCS - 1B

Sept. 2021 – Expected April 2026

Relevant Courses: Designing Functional Programs (Advanced) - CS 145