Ayan Hafeez

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EDUCATION

University of Waterloo   Sept. 2021 – July 2026
Bachelor's of Computer Science - BCS - 1A/B   *Waterloo, ON*
Relevant Courses: Designing Functional Programs (Advanced) - CS 145

TECHNICAL SKILLS

Languages: C++, C, Javascript, Python, HTML/CSS, Racket, PHP, Java, PHP
Frameworks / Packages: React, Node.js, Express, Bootstrap, BeautifulSoup4, NumPy, Apache
Developer Tools: Git, Postman, MongoDB, MySQL, Visual Studio, Heroku, LaTeX

WORK 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 the 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
- Programmed 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. 2019 – June 2021
SET Foundation NPO (Ottawa Division)   *Ottawa, ON*
- Served as co-president for the SET Foundation NPO; a STEM-focused organization targeting youth enrichment
- 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 -

Qi Language Interpreter | *C/C++, Github/Git*   May 2021 - June 2021
- Developed a fully-featured interpreter for a custom programming language using C and C++
- Designed an efficient lexer, tokenizer, recursive-descent parser, AST model, and execution algorithm
- Implemented support for I/O, control flow, data structures, functions, and built-in object methods
- Employed a combination of manual testing and automation via GitHub Actions to ensure best practices during CI

CCScraper | *Python, BS4, SQLite*   Apr. 2021
- Designed a web scraper app using Python and BeautifulSoup4 to track hardware prices and availability
- Created a CLI for user parameter input during the scraping and parsing process for canadacomputers.com
- Linked scraping 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 an autonomous slideshow presentation generator during the HackTheNorth2020++ hackathon
- Implemented payload summarization via NLTK and automatic slide generation with the Google Slides API
- Produced an efficient and precise image searching algorithm using Bing Search API to yield relevant visuals