Ayan Hafeez

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EDUCATION

COLONEL BY SS
OSSD
Expected June 2021 | Ottawa, CA
Cum. GPA: 4.0 (98%)

IB Diploma
Expected May 2021 | Ottawa, ON
HL Physics, HL Chemistry, HL English
SL Math, SL ITGS, SL French

UNIVERSITY OF WATERLOO
Incoming Sept 2021 | Waterloo, CA
BCS (Honours)

LINKS

Github: // Ayan-dot
LinkedIn: // ayanhafeez

PROJECTS

2381C CODEBASE
Codebase for 2020-2021 Change Up VRC game.
- As software lead on the team, developed trigonometry based odometry routines for multiple robots allowing for APS (absolute position surveillance) .
- Used PID loops and custom acceleration utilities to develop and alter robot motion profiling.

QUIKSLIDE (HTN 2020++)
Quikslide.tech
Used NLTK along with multiple ML text APIs to create a web app that took user input and automatically generated relevant slideshow.
- Processes human speech via Google API, custom text splitting function and keyphrase seeder.
- Backend in Flask, hosted on Heruko.

COMPUTER SCIENCE EXTENDED ESSAY
IB Extended Essay on various hash function families (Blake-2 and SHA-3/Keccak).
- Utilised various libraries to carry out experimentation on software based implementations of hashes.
- Developed background research and explanatory paper on cryptographic hashing speeds.

WORK EXPERIENCE AND EXTRACURRICULARS

2381 VEX EDR | Team Captain & Software / Hardware Developer
April 2019 – Present | Ottawa, ON
- Founder and captain of team 2381W, led team of 11 engineers to world qualification in the 2019-2020 EDR competition. Acted as co-lead of hardware development.
- Lead software developer and hardware engineer on team 2381C — won multiple international accolades across the 2020-2021 EDR competition.
- Developed hardware mechanisms and systems via the VEX v5 framework, programmed multiple robots in C++/C, led multiple team members in meeting deadlines and competing at competitions across North America.

SET FOUNDATION (NPO) | Co-President
March 2019 - Present | Ottawa, CA
- Current Co-President of the Ottawa sector of SET, managing multiple events including the inaugural SET-UP Conference, and the SPARK pitch competition
- Leadership role on executive team, overseeing and managing financial solvency, corporate relations, marketing, and logistics.
- Founder and organizer of SET.Hacks(), organizer of SET-UP, SET 2019, and SPARK. Combined attendance of over 600 students across Canada and US.

NEBULA NET (NPO) | Founder and Executive & Former Tutor
Aug 2020 – Present | Ottawa, ON
- Founded this NPO with 2 other secondary school students— oriented towards hosting virtual tutoring sessions to ameliorate education amidst COVID-19
- Managed and created virtual resources, maintained software platform for tutoring, moderating service and performed other administrative tasks.
- Took role of Math Tutor for 1 season, held classes for 7 students.

OTTAWA ROBOTICS ACADEMY | Development Intern
June 2020 - August 2020 | Ottawa, ON
- 2 month intern, helped developed virtual platform for robotics learning via research into hardware and software solutions.

DIGITERA INTERACTIVE | Full Stack Engineer Intern
July 2021 - Present | Ottawa, ON
- Developed codebases for full-stack projects, frameworked using PHP backends and VueJS frontends.
- Worked with various utilities including Postman API testing, MySQL and XAMPP to efficiently host and develop a working web app.

SKILLS

Software Development: C++ • PHP • Python • HTML / CSS / JS
Physical Modelling: SketchUp • Autodesk Inventor • Environment Rendering
Hardware Development: Basic Electronics and Mechanics • Knowledge of Computer Hardware
Technical Ability: Technical Writing • Experiment Procedure Development • Design Evaluation
Data / Media Processing: Adobe Suite • Microsoft Suite • Fundamental Statistics

ACHIEVEMENT

Year	Scope	Achievement
2021	International	6X Excellence, 7X Robot Skills - 2381C
2020	1st internationally	Robot Skills - Dec 2020 - 2381C
2020	Local	3X Silver Medal (90%+) OCDSB
2020	International	2X World Championship Qualification - 2381W/2381C