

Mason Antrobus Electrical Engineering/Computer Science Full Stack BASc

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TECHNICAL SKILLS

Programming

- C++/Java/C#/Rust
- JavaScript/AngularJS/PHP/React
- Python/R/SQL/Ansible

Hardware

- Soldering Iron
- PCB Design
- Arduino/Microcontroller

Programs

- SolidWorks
- Sublime Text/VSCode
- KiCAD/LTSpice

TECHNICAL WORK EXPERIENCE

TENUMBRA, Remote

May, 2022 – April 2024

Lead Offensive Software/Systems Developer

- Designed numerous software programs for the company adhering to guidelines from CEO.
- Learned AngularJS on the job and gracefully assumed the work of a senior developer following their departure.
- Developed applications involving WebRTC, Custom REST APIs, and Microsoft Graph API.
- Collaborated with Red Team to pentest applications and websites.
- Achieved remote networking testing with Ansible on dozens of machines at once.

Freelance, Kelowna, BC

September, 2018 – Present

Programmer and Private Tutor

- Create personalized lesson plans on a per student basis to achieve maximum success for each student.
- Taught a large variety of subjects at all levels including: calculus, math, English, ESL, video game programming, web design, physics, and chemistry.
- Obtained and utilized sales experience to close the majority of business inquiries into jobs.
- Adjusted language use to accommodate each specific client, particularly with complicated explanations, resulting in being frequently complemented on this ability.
- Designed and managed very successful online ads on Facebook and Kijiji.

TECHNICAL PROJECTS

Presence Detection System, CAPSTONE

April, 2024

- Designed, prototyped, and manufactured a custom sensor circuit combining a PIR sensor and an ESP32 communication module to detect and transmit data concerning human presence.
- Created an algorithm in C++ to turn raw sensor data into useful analytics running on a central server.
- Effectively lead my team through the design and prototyping process.

Custom Bedroom LED Strip, Personal

January, 2022

- Utilized Arduino to control LED strip along with temperature sensor to visually see outside temperature.
- Custom designed circuit to allow original factory microcontroller to function along with the Arduino.
- Designed custom PCB in KiCAD.

Machine Learning Wine Fraud Detector, UBC

March, 2021

- Applied SciKit's machine learning linear regression in Python to create an accurate model of wine based on chemical composition that was able to detect fraudulent wines.
- Documented entire process so code is transparent to future users.

Nuclear Submarine Model, UBC**November, 2019**

- Lead my group to draft and model a nuclear submarine in SolidWorks.
- Delegated sections of the project to each member and set effective deadlines.
- Was personally responsible for modelling the nuclear reactor itself, as well as the engine room.

Live Online Collaborative Canvas Website, Campbell Collegiate**April, 2018**

- <https://canvas.masonantrobis.com>
- Achieved a grade of 100% in the class and on the project.
- Used live push notifications to make the website live to anyone without needing to refresh.
- Wrote over 10000 lines of extremely well commented code from scratch in JavaScript, PHP, and HTML/CSS.
- Implemented 256-bit password security as well as device cookies to prevent brute forcing.
- Fine-tuned the front and back end of the website to be responsive, secure, and user friendly.

EDUCATION**University of British Columbia****April, 2024*****Bachelor of Applied Science - Electrical Engineering, Computer Science Minor***

OTHER WORK EXPERIENCE**Sterling Productions, Regina, Saskatchewan****February, 2018 – March, 2018*****3rd Trumpet***

- Played trumpet in the pit band for Bullets Over Broadway.
- Collaborated with 20 other musicians to learn entire musical under time pressure.

VOLUNTEER EXPERIENCE**Campbell Collegiate Chamber Choir, Regina, Saskatchewan****September, 2014 – April, 2018*****Bass Section Leader***

- Performed for free all over Regina in churches and on the street caroling, as well as in nursing homes and palliative care.
- Coordinated basses in the choir and lead a weekly sectional as well as taught parts.

INTERESTS & ACTIVITIES

- 1st place national Canadian youth choir award (2018), jazz trumpet, electric guitar
- Volleyball, hiking, lifting, travelling