

TYLER DELAAT



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SUMMARY OF SKILLS

Lifelong programmer with a passion for technology interested in computer security, software development, the internet of things and embedded devices.

Languages Python (2.7x/3.x), C, C++, Assembly (x86, ARM), JavaScript, SQL, Java, OpenSCAD, HTML, CSS

Technologies React.js, Web.py, Flask, Django, REST, JSON, WebSockets, OpenCV, TCP/IP

Tools git, vim, VSCode, Jupyter, Fusion360, Blender, KiCAD, Electronics lab equipment, 3D printers

Hardware ARM microcontrollers, AVR, ESP32, Arduino, PIC, RaspberryPi, SPI/I2C

Software Linux, Windows, Bash, Apache, LigHTTPd, SSH

SELECTED PROJECTS

In depth descriptions of these projects and more can be found on my personal website, abusingtechnology.ca

Animatronic Tail (*C, C++, Arduino, Java, OpenSCAD, 3D printing*)

A 3D printed, wearable animatronic tail with custom designed control electronics. Physically simulated in a Java application and constructed using parametrically customizable mechanical components that can be programmatically generated using the results of the simulation.

Reflow Oven Controller (*C++, Arduino, KiCAD*)

An Arduino-based PID controller that uses a solid state relay to precisely control the temperature of a low cost toaster oven for reflow soldering.

DOSFSTRIM (*C, DOS, OS*)

An MS-DOS compatible utility to TRIM unallocated sectors from an SSD. This utility implements much of the low level disk access and filesystem code that would normally be provided by a more modern operating system in order to command the drive to discard unused blocks.

Graphical Guestbook (*Python, SQL, JavaScript, HTML*)

An online web-based guestbook that gives users drawing tools that allow them to leave a drawing or signature on the webpage.

QBasic on a Stretcher (*QBasic, QB64, Apache, HTML, REST, HTTP*)

A web application framework written in a classic programming language that was obsolete long before the world wide web even existed. That was written mostly as a technical challenge rather than a serious web application framework and it strives to be as MVC-like as the language will reasonably allow. Includes a map library, an encoding/escaping library, a templater and is capable of running in less than 64K of memory.

EDUCATION

B.Eng., Computer Engineering, McMaster University

Hamilton, ON, Canada (2017)

- Wrote software for validating and generating receipts for IEEE student branch group parts orders
- Designed firmware and hardware for an online smartphone based laser tag system

WORK EXPERIENCE

IT Director, Mayfield Golf Club

Caledon, Ontario, Canada (2010 - 2020)

- Responsible for all IT tasks including managing contractors, hardware acquisition, network configuration and hardware installation
- Built a web application based kiosk to track rounds of golf and compute handicaps
- Built an internal web application to track held vouchers and multiple types of passes

Consultant/Developer, Suncoast Information Security

Queensland, Australia (2021)

Remote position. Aided in development and troubleshooting of an ongoing Linux based embedded IoT project.