

# MATTHEW BRAUN

Available for: 4 Month Co-op Summer 2020

References available upon request

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Engineering Co-op Program  
University of Alberta

## PROJECTS

### My Website [matthewbraun.ca]

Aug 2019 – Ongoing

- This is the project I am working on currently. It is a work in progress, but check it out if you'd like to learn more about my projects!
- Utilized: JavaScript, HTML/CSS, PHP

### 3D Printer [Photos]

January 2016 - April 2016

- Built a 3D Delta Printer from scratch, ordering individual parts online
- Printer is roughly 1 meter in height, and has a printable diameter of 25cm
- Run on an Atmel ATmega2560 microcontroller with Marlin firmware
- Utilized: Atmel, Simplify3D, Repetier, Pronterface, C++

### Tweet Heat [Demo Video]

November 2018

- Used a Twitter API key to collect latitude and longitude coordinates of live Tweets across North America, along with the Tweets being posted
- This project won the HackED Beta 2018 hackathon competition, and a demo can be found on my website
- This was coded in under 24 hours in a group of 4
- Utilized: Python, Flask, SQLite, REST APIs, HTML

### Audio Visualizer [Demo Video]

March 2019 - April 2019

- Created a program which would take an audio file as input, and convert it into a 3D frequency bar graph animation using the Fast Fourier Transform
- Utilized: C++, Qt, Algorithms, Data Visualization

## WORK EXPERIENCE

### Software Consultant

DevFacto Technologies [Link]

Jan 2020 - Apr 2020 (Full-time) Edmonton, AB

- Communicated well in teams to discuss and develop software solutions for internal company work, as well as for a large insurance client of theirs
- Participated in Agile Scrum stand-ups and retrospectives to identify road-blocks, maintain high productivity, and plan future developments
- Gained significant experience doing backend web development using .NET Core and C#, as well as some experience on frontend development using React and TypeScript

### Deskside Support Technician

Compugen Inc. [Link]

May 2019 - Aug 2019 (Full-time) Edmonton, AB

- Worked with hundreds of Government of Alberta employees from several different Edmonton office locations, on a large-scale Windows 10 Enterprise domain
- Communicated with these clients effectively to ensure that their issues were resolved in a timely manner
- These issues entailed work such as: updating BIOS firmware, reimaging PCs, network diagnostics, editing registry keys, updating databases, replacing laptop parts.

## LANGUAGES/SKILLS/TOOLS

Python C# C/C++ Java MATLAB Go

TypeScript/JavaScript PHP HTML/CSS R

SQL .NET React Flask BASH DOS

Web Development REST APIs Database Querying

Client Consultation Agile Methodology Scrum

Object-Oriented Programming Data Visualization AI

Image+Audio Processing Algorithms+Data Structures

Server Management Web Scraping Microcontrollers

Windows Linux/Unix Office 365 VSCode

Git Docker Kubernetes Node.js Swagger

Visual Studio OpenCV ROS Simplify3D Qt

## EDUCATION

### BSc. Computer Engineering, Co-op

University of Alberta

Completed Academic Terms: 5/8

Completed Work Terms: 2/5

Sept 2016 – May 2022

### Achievements + Qualifications

- Faculty of Engineering Academic Excellence Scholarship
- Rutherford Scholarship
- Class 5 Advanced Driver's License and a reliable vehicle

## EXTRA-CURRICULARS

### CSA SciSat Challenge

NASA International Space Apps Challenge [Link]

Oct 2019

- Competed and went to nationals with a team of 6
- Developed an app to visualize massive subsets of gas concentration data around the globe of nearly 30 different gases, collected by CSA

### Software Team Member

Space Exploration Alberta Robotics [Link]

Sep 2018 - Ongoing

- Worked on drive controls and object shape detection for our team's rover

### About Me

- I enjoy going rock climbing, weightlifting, and music
- I'm very friendly! I have great communication skills