



Manuel Dionne

Software Engineering Class of 2021 - University of Waterloo

Bilingual FR/EN - Dual Citizen CA/USA

Recognition

AideTechBot 
mdionne@edu.uwaterloo.ca 
mdionne.me 

- Winner for best hack at Hack the North (*1000 participants*)
- UNB Beaverbrook Scholar \$40,000 Recipient
- Two time bronze medalist at the Canada-Wide Science Fair (*600+ participants*)

September 2017

May 2016

May 2015-2016

Skills Summary

- *Languages:* C++, C#, C, JavaScript, Python, PHP, HTML & CSS
- *Tools:* Vim, MySQL, Git, Bash, Visual Studio, Node.js, React, WPF & XAML, MongoDB

Work Experience

Focal Healthcare

Toronto, ON

Software Developer Intern

September – December 2018

- Implemented and designed a software subsystem to emulate ultrasound hardware to massively speed up "on the fly" debugging and overall development. This was done with C# and WPF.
- Helped maintain and design parts of FDA-approved software running on medical biopsy devices.
- Worked with multidisciplinary professionals to implement bug fixes and feedback from doctors.

ConsenSys

Waterloo, ON

Software Developer Intern (Full-Stack)

January – May 2018

- Designed and built a decentralized management web app in React, altJs and Express.js.
- Developed interface for a graph database (Neo4j) to represent and store relationships between users, roles and teams within a non-hierarchical organization.
- Facilitated the first releases of the web app to an active user-base of **700+ people** while continuously implementing customer feedback and bug reports.

Finastra (D+H)

Mississauga, ON

Software Developer Intern

May – September 2017

- Created command line tools for automation of XML file generation and processing using C#.
- Automated the verification of data sent through a RESTful API by checking what is displayed on the UI against an SQL database using Selenium for unit testing.
- Cut down regression testing process from **3 days to 3 hours** using Powershell scripts.

Projects

No-Name Raytracer C++

September - December 2018

- A simple raytracer built entirely in C++ that supports different types of materials and lights.

WiFi Vision Python, matplotlib, Arduino, C++ (*Best Hack - Hack the North*)

September 2017

- Robotic arm on a rail 3d printed rail system that uses 6 Arduino ESP8266 WiFi chips to determine signal strength and plot a heatmap of objects behind walls.

Tiva Web Server C++, Python, HTML, CSS

November 2016

- Fully functioning HTTP server for a Tiva C Series microcontroller that has an Orbit Boosterpack.

Bluetooth Messaging C#, WPF, XAML, Bluetooth

December 2016

- Desktop app to let people send or receive SMS on their Bluetooth equipped PC using their phone.
- Works with almost any Windows laptop and any phone that supports Bluetooth MAP.

VoteCDJ C#, PHP, MySQL, Javascript (*Bronze - Canada Wide Science Fair*)

June 2015 - May 2016

- Online portal to allow users to log-in through an online portal and vote using their student ID.

SatTrak C#, WPF, Python (*Bronze - Canada Wide Science Fair*)

June 2014 - May 2015

- Software created to facilitate the tracking and acquisition of satellite downlink from Earth orbit. Specifically made for ham radio operators.
- Fetches TLE data from an online NORAD database and calculates the position of satellites to move a robotic antennae controlled by a Raspberry Pi.