


# Manuel Dionne

Software Engineering Class of 2021 – University of Waterloo  
French and English – Canada/USA Dual Citizen

 @aidetechbot

 mdionne.me

 mdionne@uwaterloo.ca

 (506) 740-4034

## Skills and Tools

---

**Fluent:** Python, C, C#, HTML5, SQL      **Intermediate:** PHP, C++, CSS, JavaScript  
GNU/Linux, Git, Github, Raspberry Pi, Visual Studio, SVN, Gimp, Ethereum, Arduino

## Relevant Experience

---

### Automation Software Developer – *D+H (Now Finastra)* May 2017 – 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, all while using Selenium and unit testing.
- Cut down regression testing process from **3 days to 3 hours** using Powershell scripts.

### Freelance IT – *Digital Signage Setup* August 2016

- Installed Xibo digital signage software on a display server and programmed widgets.

## Personal Projects

---

### 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 view of objects behind walls.

### CoinZ – *Python, urwid, scikit-learn* June 2017 – Present

- Command-line UI and framework for running algorithmic trading bots on crypto currency exchange markets. Algorithms include: Simple MACD, ARIMA price predictor, etc.
- Includes algorithm back testing, multithreaded algorithm execution and much more.

### Dorifto.racing – *PHP, Bash, HTML, CSS, ffmpeg* May 2017

- Initial D fan website dedicated to overlay music onto a video of choice using ffmpeg.
- Receives, on average, 30 views per day with a total of 6,000 page views to date.

### Tiva Web Server – *C++, Python, HTML, CSS* November 2016

- Fully functioning web server for a Tiva C Series microcontroller that has an Orbit Boosterpack.
- Includes most functions from RFC 2616 (HTTP) like GET, POST, error codes, etc.

### Bluetooth Messaging – *C#, WPF, 32feet.NET Bluetooth* December 2016

- Allows users to receive SMS on their Bluetooth equipped PC using the Message Access Protocol. Sleek UI, built entirely using XAML and WPF.
- Works on any phone that has Bluetooth and supports the MAP protocol.

### VoteCDJ – *C#, PHP, MySQL, Javascript (Bronze – Canada-Wide Science Fair)* June 2015 – May 2016

- Voting system created for the student government at my school.
- Allows users to log-in through an online portal using their student ID. The entire user interface was made from scratch using HTML and CSS.

### SatTrak – *C#, Python, WF (Bronze – Canada-Wide Science Fair)* June 2014 – May 2015

- Software created to facilitate the tracking and acquisition of satellite downlink from Earth orbit. It is 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.

## Awards and Achievements

---

- |  |                |
|--|----------------|
| • Winner for best hack at Hack the North (1000 participants)                       | September 2017 |
| • Finalist at ECHacks (200 participants)   | November 2016  |
| • UNB Beaverbrook Scholar \$40,000 Recipient                                       | May 2016       |
| • Two time bronze medalist at the Canada-Wide Science Fair (Over 600 participants) | May 2016       |
| • International Summer School for Young Physicists Award – Perimeter Institute     | July 2015      |