

# Manuel Dionne

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

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## Skills and Tools

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**Fluent:** Python, C, C#, Javascript, SQL

**Intermediate:** PHP, C++, CSS, Assembly (ARM)

GNU/Linux, Git, Github, Raspberry Pi, Visual Studio, SVN, Gimp, Ethereum, Arduino, Node.js, React

## Relevant Experience

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### Full-Stack Developer – *ConsenSys*

January 2018 – May 2018

- Helped design and build a decentralized management web app in React, altJs and Express.js.
- Did front-end/back-end work and was involved in facilitating the first releases to a user-base of 700+ people. All while continuously implementing customer feedback and bug reports.
- Helped build an interface for a graph database (Neo4j) to represent and store relationships between users, roles and teams within a non-hierarchical organization.

### 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 using Selenium for unit testing.
- Cut down regression testing process from **3 days to 3 hours** using Powershell scripts.

## Personal Projects

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### 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.

### 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

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- Winner for best hack at Hack the North (1000 participants)

September 2017

- 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