Manuel Dionne

Software Engineering Class of 2021 - University of Waterloo
Bilingual FR/EN - Dual Citizen CA/USA

AideTechBot
mdionne@edu.uwaterloo.ca
mdionne.me

Skills Summary

- *Languages*: C++, C#, C, JavaScript, Python, PHP, HTML & CSS
- *Tools*: Vim, MySQL, Git, Bash, Visual Studio, Node.js, React, WPF & XAML, MongoDB
- Experienced in Windows app development and full stack web development.
- Interested in low-level, embedded development and graphics programming

Work Experience

Focal Healthcare — Toronto, ON
Software Developer Intern — September – December 2018

- Designed and created a software subsystem to emulate ultrasound hardware to massively speed up "on the fly" debugging and overall development. This was done with C#, WPF, and XAML.
- 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

- 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.

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.

Recognition

- 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 *(600+ participants)* — May 2015-2016