


Manuel Dionne

1B Software Engineering – University of Waterloo

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Programming Languages and Skills

Fluent: Python, C, C#, HTML5

Intermediate: MySQL, PHP, C++

Learning: JavaScript, CSS

GNU/Linux, Git, Github, Raspberry Pi, Visual Studio, SVN, Gimp

Personal Projects

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

- SatTrak is software I created to facilitate the tracking and acquisition of satellite downlink from Earth orbit.
- The program fetches TLE data from an online NORAD database and calculates the position of satellites to move a robotic antennae controlled by a Raspberry Pi.
- The project was programmed with simplicity in mind, specifically for ham radio operators. It helps optimize your downlink signal by tracking satellites with precision.
- It is modular and extremely easy to adapt it for different hardware setups.

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

- VoteCDJ is voting system created for the student government at my school.
- Tested on over 300 users.
- It 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.
- The back-end, serves a dynamic vote ballot to the user depending on their school year.
- The tallying of the votes is managed by a database connected to a program where the vote administrator can control every aspect of the vote.

Bluetooth Messaging – C#, WPF, 32feet.NET Bluetooth

December 2016

- This is a program that allows users to receive texts 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

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.
- Allows sending a POST to upload files to a built-in file system that utilizes the EEPROM.

Previous Experience

Customer Service Specialist - Wal-Mart Canada

June 2014 – April 2016

- Ensure customers get the most out of their shopping experience
- Give clear and concise responses to the customer's questions

Freelance IT - Digital Signage Setup

August 2016

- Installed Xibo digital signage software on a display server
- Programmed modules to expand the software's functionality

Involvement and Volunteering

Cité des Jeunes A.-M.-Sormany

September 2012 – June 2016

Student council technical advisor.

- Implemented a large scale voting system
- Graphic design for school posters

Hack the North

September 2016

Helped the event run smoothly.

Awards and Achievements

- Became a SHAD Fellow **July 2016**
- UNB Beaverbrook Scholar (40,000\$ scholarship) **(Declined) May 2016**
- Bronze medal at the Canada-Wide Science Fair **May 2016**
- First place in the provincial Computer Programming Contest UCMC **May 2015**
- International Summer School for Young Physicists Award **July 2015**