

# RAVEENA D'SOUZA

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## RELEVANT EXPERIENCE

### Software Developer | Flynn Group of Companies

*C#, .NET, Xamarin, SQL, Swagger, Quartz .NET* Jan - Apr 2018

- ◆ Developed a web application through Agile methodologies to interact and modify an ERP database with an integrated API and job scheduler
- ◆ Created scripts to generate geocodes for 120k addresses and tax information for past projects using Google Maps and Avalara Tax APIs
- ◆ Designed automated tests using the Xamarin test cloud for a cross-platform mobile app used to maintain employee time logs and company contracts

### Automation Developer | Industry 4.0 Lab

*PLCs, C#, AutoCAD* May 2017 - Present

- ◆ Developed PLC logic for the automation of a mini-factory and C# interface to control the flow of products (modelled by RFID chips)
- ◆ Designed detailed blueprints of the factory using AutoCAD

### Research Assistant | Engineering Ideas Clinic

*C++, SolidWorks, Excel, VBA* May - Aug 2017

- ◆ Modelled several two-axis arms on SolidWorks and built them with aluminum extrusions and pneumatics with an Arduino interface
- ◆ Utilized Excel and VBA to analyse the flow and efficiency of a scaled-down model factory using RFID chips as production line objects

## PROJECTS

### Toaster Printer | Hack the North 2017

*Python, Arduino, hardware* Sep 2017

- ◆ Designed a circuit with components from a toaster to create a 12x12 grid of heating elements to toast images onto bread and controlled with Arduino

### ATM Robot

*ROBOTC (C based language), sensors* Oct - Dec 2016

- ◆ Utilized various sensors (colour, ultrasonic, touch) for an ATM robot that supported accounts, withdrawals, deposits, and counterfeit recognition

### VR Personal Assistant | WearHacks 2017

*Unity, C#, Myo gesture control armband* Mar 2017

- ◆ Developed a VR personal assistant for the Myo armband with Unity and C# that supports features such as notes, health, calendar, and reminders

### Vulcademy | Hack the Valley 2018 | Won Best Design prize

*JavaScript, Node.js, MongoDB* Feb 2018

- ◆ Created a web app with features such as audio recording, polls, and Q&A
- ◆ Stored profile data and previous lecture logs on MongoDB to display chronological information on student and professor dashboards

### Pet Store

*Python, Pygame* May - Jun 2015

- ◆ Developed and tested a virtual store for buying and selling pet accessories

## LANGUAGES

- ◆ C
- ◆ C++
- ◆ Python
- ◆ SQL
- ◆ C#
- ◆ JavaScript
- ◆ Java
- ◆ Visual Basic

## TOOLS

- ◆ AutoCAD
- ◆ Arduino
- ◆ Git
- ◆ Xamarin
- ◆ SolidWorks
- ◆ GD&T
- ◆ Unity
- ◆ Visual Studio

## EDUCATION

- ◆ Bachelor of Applied Science  
**Mechatronics Engineering**  
University of Waterloo  
Sep '16 – Apr '21 (expected)
- ◆ Courses: Sensors and Instrumentation, Computer Structures and Real-Time Systems (C, ARM Cortex-M), Linear Circuits

## INVOLVEMENTS

- ◆ Volunteer at the UW Electric Vehicle Challenge and Intl. Autonomous Robot Racing Competition
- ◆ Awarded first place for website design contest at Hack the North
- ◆ Eng. Society Class Rep. for Fall 2017 and Spring 2018
- ◆ Communications Director and Shadow Day Manager for the Eng. Ambassadors
- ◆ Tutor at Kumon Centre for Math and Reading for 2 yrs

## INTERESTS

- ◆ Ultimate Frisbee player
- ◆ Badminton Club member
- ◆ Hackathon lover
- ◆ Eng. outreach volunteer
- ◆ Knitting enthusiast