

# Charmaine Lam

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## EDUCATION

### University of Waterloo

Bachelor of Applied Science Candidate, Honours Biomedical Engineering

Waterloo, ON

September 2019 – Present

## SKILLS

**Coursework** Data Structures & Algorithms · Cooperative & Adaptive Algorithms · Human Factors in Design

**Programming** C# · C++ · TypeScript · JavaScript · Python · HTML · CSS

**Tools** GitHub · Visual Studio · Visual Studio Code

**Activities** Hack the Valley 4 · StarterHacks · DeltaHacks · WISE Design Challenge

## WORK EXPERIENCE

### BTNX Inc.

Software Developer

Markham, ON

May 2020 – Present

- Utilizing technologies such as [LINQ](#), [ASP.NET Core MVC](#), [Entity Framework](#), [Microsoft SQL Server](#), [React](#), [TypeScript](#), and [C#](#) to modernize company's internal web application
- Reverse engineering previous version of application to design and develop a faster, more intuitive interface

### University of Waterloo

Research Assistant

Waterloo, ON

September 2019 – January 2020

- Analyzed research data on the primate early visual system to create a cell-population hierarchy in Excel
- Presented connection properties between cortical areas in a graphical mind map using PowerPoint

### K&K Dance Dreamz Inc.

Office Administrator

Markham, ON

September 2017 – June 2019

- Ensured comfortable, safe and welcoming environment for students by closely collaborating with parents, teachers, and students, resulting in high customer retention rate and increased profit

## PROJECTS

### DrugLock

Ongoing

- Engineered a solution using [Flask](#) and [Python](#) to lower human error during withdrawal of medication in hospitals
- Implemented a facial recognition security feature using [OpenCV](#) and [dlib](#)
- Reimagined the initial project using a [Firebase](#), [Express](#), [React](#), and [NodeJS](#) stack

### School Task Organizer

Ongoing

- Developing a web-app containing a planner and deadline-tracker using [ASP.NET Core Blazor \(C#, HTML\)](#)
- Implementing [ASP.NET MVC Web API](#) to fetch user-data stored in [SQL Server](#)

### Haptic Gait Feedback, Co-Lead – BioMechatronics Design Team

Ongoing

- Leading a team through a devised [Arduino](#) project, purposed to aid gait retraining for users with Parkinson's

### MyoSensor Stress Management

February 2020

- Developed a system using [React](#) and an EMG sensor with [Arduino](#) to provide a tool for stress management
- Created a dynamically updating graph to display users' forearm muscle activation
- Embedded Spotify play button frames to provide destress music recommendations

## VOLUNTEERING & LEADERSHIP

### Vision Youth Leadership Program

Outdoor Leadership Team – Coordinator

Toronto, ON

September 2018 – Present

- Created a multi-day training schedule and various lesson plans to teach outdoor skills to 50+ people
- Delegated tasks and iterated safety procedures to lead 30+ people through multiple overnight expeditions

## AWARDS & ACHIEVEMENTS

### Leadership

Duke of Edinburgh Gold · Excellent Youth Award · Prefect Organization

### Other

International Dance Organization 3<sup>rd</sup> Place · Toastmasters Public Speaking Program