Emily **Hem**

4A Computer Engineering

CONTACT

❖ (519) 350-3638
❖ eshem@uwaterloo.ca
❖ https://www.emilyhem.com

SKILLS

Expert: C++

Proficient: C, Python, Angular (HTML, CSS, TypeScript), SQL

Prior experience: Java, C#, PowerShell, AutoIt, Bash

EDUCATION

Candidate for Bachelor of Applied Science
Expected Graduation 2023
Computer Engineering
University of Waterloo

Relevant Coursework:
• Algorithms and Data Structures
• Systems Programming and Concurrency
• Real-Time Operating Systems
• Database Systems

ACHIEVEMENTS

People's Choice Award
Runner-Up
GI Game Jam Spring 2021

Best IoT Hack
StarterHacks 2018

Terms Dean's Honours List
Winter 2019

EXPERIENCE

❖ **Software Engineering - Fintech** *Jan.-April, 2022*
Barracuda FX, LLC, Kitchener, ON
• Investigated and fixed a scaling error using **C++** and **Python** while navigating system level interactions and dependencies to prevent the possible overcharging of clients by millions of dollars
• Coordinated API changes between a major bank and our platform to ensure compatibility

❖ **UI Software Engineering** *May-Aug. 2021*
Kaleidescape, Inc., Waterloo, ON
• Investigated and documented user experience requirements to define the design for a new device discoverability feature
• Implemented front-end features, written in **C++**, on an embedded platform
• Proposed procedural changes in scrum meetings and presented at sprint demos to stakeholders

❖ **Cloud Security Hacker** *Jan.-April, Sept.-Dec. 2020*
Agilicus Incorporated, Kitchener, ON
• Designed and implemented an API to retrieve user metrics from a columnar database using **OpenAPI**, **Python**, and **SQL**
   o Set up a lookup table and mapped IDs to names using **Python**, **Kubernetes**, and **Bash**
   o Implemented a graphical user interface to provide visualization for the data using the **Angular** framework (**Typescript**, **HTML**, and **CSS**)
• Simplified user experience through the creation of 3 guiding steppers
• Developed a pagination strategy across multiple components in the backend (**Python**, **SQL**) and frontend (**Angular**)
• Coordinated changes in 13 components under active development to bring all company APIs into adherence with a uniform standard

PROJECTS

❖ **Balcony Rave**, https://git.io/Jua1r *June 2021*
• Endless 2D side-scrolling rhythm game developed in **Unity** for the GI Jam

❖ **Midnight Tempo**, https://git.io/JL7Yy *Sept. 2020*
• 3D first-person rhythm game developed in **Unity** where the player's goal is to click on all the targets as they spawn according to the beat

❖ **Smart Waste Management System**, Hack the North 2019 *Sept. 2019*
• Developed an Android app in **Java** which connects to a Bluetooth-enabled garbage bin to improve the sorting of waste

❖ **EnableU**, StarterHacks 2018 *Mar. 2018*
• Built and coded an Arduino 101 prototype using **C** to control LEDs representing braille letters to address the gap in transport accessibility