

# Emily Hem

## CONTACT

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## SKILLS

**Expert:** C++, Java, Python

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

**Prior experience:** C#, Rust,  
Ruby, PowerShell, Autolt, Bash

## EDUCATION

### Bachelor of Applied Science

*Class of 2023*

Computer Engineering  
University of Waterloo

Relevant Coursework:

- Systems Programming and Concurrency
- Database Systems
- Algorithm Design & Analysis
- Programming for Performance
- Computational Intelligence

## 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 Development Engineer Intern

*Sept.-Dec. 2022*

Amazon Web Services, Inc., Seattle, WA

- Created a periodic job to publish regional metrics while capturing the complexity of capacity makeup for a distributed database
- Coordinated with multiple teams and stakeholders to define project requirements and ensure that quality and performance standards were met
- Started a prototype for a new dashboard tool to centralize capacity management

### ❖ Software Engineering - Fintech

*Jan.-Apr. 2022*

Barracuda FX, LLC, Kitchener, ON

- Investigated and fixed a scaling error while navigating system-level interactions and dependencies to prevent the possible overcharging of clients by millions of dollars
- Synchronized 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 on an embedded platform
- Proposed procedural changes in scrum meetings and presented at sprint demos to stakeholders

### ❖ Cloud Security Hacker

*Jan.-Apr., Sept.-Dec. 2020*

Agilicus Inc., Kitchener, ON

- Designed and implemented an API to retrieve user metrics from a columnar database using OpenAPI and Kubernetes
- Implemented a graphical user interface to provide visualization for metrics using the Angular framework
- Simplified user experience through the creation of 3 guiding steppers
- Developed a pagination strategy across multiple components
- Coordinated changes in 13 components under active development to bring all company APIs into adherence with a uniform standard

## PROJECTS

### ❖ KWCA Website, <https://kwca.ca>

*July 2023*

- Launched a website to showcase the association's objectives and initiatives

### ❖ Emergency Vehicle Detection

*May 2022-Mar. 2023*

- Designed a system that can detect and notify the driver of emergency vehicles using digital signal processing and machine learning for the 2023 Waterloo Engineering Capstone Design

### ❖ Balcony Rave, <https://git.io/Jua1r>

*June 2021*

- Endless 2D side-scrolling rhythm game developed in Unity for the 2021 GI Jam