

# Kara Dietz

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## SKILLS

**Languages:** C/C++, Python, Java, Kotlin, Rust, Ruby, Go, SQL, Bash, Objective-C, Swift

**Tools & Frameworks:** Docker, Kubernetes, GraphQL, Kafka, React, Rails, Spring, AWS, GCP, Maven, Git

## WORK EXPERIENCE

### Faire | Backend Engineer Intern

Sept – Dec 2022

- Designing guard against **credential stuffing attacks** by identifying, isolating, and automatically requiring multifactor authentication for suspicious actors to stop the attack and prevent account takeovers, increasing **platform security**

### Meta | Software Engineer Intern

May – Aug 2022

- Built invite links for **end-to-end encrypted group chats** used by Messenger, Instagram, Oculus, etc., including C infra and iOS UI for **200K+ daily active users**, facilitating the transition to an encrypted messaging infrastructure
- Architected a **privacy-centric** metrics aggregation system which stores client-side metadata to reveal decryption error frequencies and recovery latencies, and logging sanitized results for UX insights
- Streamlined tedious decryption error simulations, eliminating up to **20-minute** test setup for **30+ engineers**

### Shopify | Backend Developer Intern

May – Aug 2021

- Integrated **theme app extensions** into online store editor to enhance store customizability for **2 million+ users**
- Designed **caching system** for app blocks, decreasing average load time from **40ms to 3ms**
- Automated complete dev environment setup used by team of developers, saving **~20 minutes/day** for each user
- Built robust tooling for app extension developers to quickly verify version compatibility without manual testing

### Shopify | Production Engineer Intern

Sept – Dec 2020

- Spearheaded **auto-scaling** Kafka message streams by designing system to monitor traffic, calculate optimal parallelization, and deploy results to minimize resource usage for **1 million+ messages/sec**, saving **3+ hours/week**
- Developed reusable foundation for seamless automated infrastructure maintenance with jobs using a python package and a deployment process using Docker and Kubernetes

### Capital One | Software Engineer Intern

Jan – Apr 2020

- Created AWS Lambda, Kafka, and AWS Kinesis serverless pipelines to detect malicious patterns and notify customers in real-time of potentially fraudulent activity, achieving **>95%** customer satisfaction rating
- Added integration tests to deployment lifecycle, removing **5-day** approvals by exceeding quality thresholds

### OpenText | Software Developer Intern

May – Aug 2019

- Designed web debugging tool to categorize test failure results, accelerating testing and saving **~4 hours/week**
- Automated **100+** UI tests **1 month faster** than expected, and accelerating test runtime by **>5x**

## PROJECTS

### Kid Investor | Educational game simulating the stock market to teach kids about investing

- Worked with a non-profit organization to commercialize a web app with added support for facilitated classroom sessions and a new secure login system using Magic Links with React, Spring, and MySQL

### Ballerinify | iOS app using machine learning to identify the user's dance moves in real-time

- Employed the Tensorflow Posenet machine learning model to map body parts and calculate ballet dance moves

## EDUCATION

Sept 2018 – Apr 2023

### University of Waterloo | Candidate for Bachelor of Software Engineering

GPA: 3.9/4.0

Coursework: Data Structures & Algorithms, Concurrency, Database Management, Operating Systems, Advanced Networks, Software Design & Architectures, Programming for Performance, User Interfaces, Testing