

# Karim El Shenawy

SOFTWARE ENGINEER · FULL STACK DEVELOPER

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## Skills

<b>Programming</b>	TypeScript, JavaScript, Python, Go, C/C++, Java, C#, HTML, CSS, PHP, BASH, SQL, Gherkin, Groovy
<b>Frameworks</b>	Vue, React, Tailwind, React Native, Next.js, Nuxt.js, GraphQL, Jest, WebdriverIO, Playwright
<b>Tools</b>	AWS, Azure, Git, GitHub Actions, GitLab CI, MongoDB, Redis, PostgreSQL, MySQL, Jenkins, Terraform, Serverless, Docker, Kubernetes, OpenAI
<b>Architecture</b>	Well Architected Platform, DDD, BDD, TDD, SOLID principles, Agile, Design by contract

## Experience

### Enlighted Inc | Siemens

Waterloo, ON Canada

Full Stack Software Developer

Jul 2021 - Present

- Developed and launched a highly efficient Hybrid Workplace Assistant solution and **full-stack web/mobile application** with Slack Chatbot integration using an atomic design system. Leveraged **Javascript/Typescript, Vue.js, Tailwind, GraphQL, AWS, Frontegg, Auth0 & OpenAI API** to create intuitive, user-friendly applications that drove promising adoption with a quarterly increase of 15% in sign ups & user engagement.
- Architected and created a secure **Backend For Frontend (BFF)** design pattern using **AWS API Gateway & AWS AppSync**.
- Designed and implemented a Microservice Backend & an Event-Driven Architecture with a Recommendation Engine using **AWS Lambda, EventBridge, DynamoDB & CDK**. Reduced application response time by 40%.
- Created a UI component library leveraging **Vue.js, Tailwind & Storybook**, utilized internally to accelerate software application development.
- Spearheaded migrations from **Jenkins/Bitbucket** to **GitLab CI & Terraform**, optimizing CI/CD from an average of 20 mins to 6 mins.
- Developed highly responsive solutions for customer experience, leveraging feature flagging with **LaunchDarkly**, product insights with **Pendo**, and blue-green deployment CI/CD.
- Created and managed a Co-op program to accelerate hiring within the team and mentored 5 co-op students, providing guidance on technical tasks, communicating expectations, and providing feedback on their work.

### Blackberry

Waterloo, ON Canada

Security Research Student

Apr 2020 - Aug 2020

- Developed a **Python** exploit for FFMpeg utilizing a variable counter plugin to the LLVM compiler, exploiting the **FFMpeg Buffer Overflow Vulnerability CVE-2016-10190**. Researched variance in number of variable calls during vulnerable program exploitation.
- Conducted a comprehensive security analysis of the tool "**Docker Slim**" and documented findings in a report posted on the Development Wiki, providing guidance to Blackberry Developers based on research results obtained from analyzing sample dockers.

### Blackberry QNX

Ottawa, ON Canada

Security Software Development Student

Jan 2020 - Apr 2020

- Developed and executed **Python** unit test cases using **Pytest framework** for the core Security features of QNX Operating System, enhancing the reliability of the system utilized in over **150 million vehicles worldwide**.
- Conducted extensive research to evaluate the benefits of the Cryptography Library OpenSSL over LibTomCrypt, leading to the successful integration of **OpenSSL in C-based** Security features and resulting in a **25% improvement in system performance**.
- Implemented Jenkins Pipeline for automated unit testing and efficient CI/CD process, **reducing deployment time by 30%**.

## Education

### McMaster University

Hamilton, Canada

BEng in Software Engineering

May 2021

- Minor in Mathematics with focus on Cryptography

## Certifications

2021 **AWS**, Certified Cloud Practitioner

2022 **HashiCorp**, Certified: Terraform Associate (002)

## Personal Projects

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|------------------------|---|
| <b>TeamFill (Demo)</b> | A (mobile-first) web app that helps users quickly find local pickup games, <b>React, Material UI &amp; Firebase</b> . |
| <b>GoBitly</b>         | A URL shortening service and a link management platform via browser extension, <b>Go, MongoDB &amp; React</b> .       |