

Karim El Shenawy

SOFTWARE ENGINEER · FULL STACK DEVELOPER

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Skills

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

Experience

Enlighted Inc | Siemens

Waterloo, 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 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. Achieved a 35% increase in user engagement.
- Architected and created a secure **Backend For Frontend (BFF)** design pattern using **AWS API Gateway & AWS AppSync**.
- Designed and implemented a Microservice & an Event-Driven Architecture with a Recommendation Engine using **AWS Lambda, EventBridge & DynamoDB**. 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/Terraform** to **GitLab CI & AWS CDK**, 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.
- Devised and implemented a **GraphQL introspection integration** leveraging **Postman** to establish E2E tests for all Backend services.
- 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, 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, 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

- TeamFill (Demo)** A (mobile-first) web app that helps users quickly find local pickup games. Built using **React, Material UI & Firebase**.
- GoBitly (Demo)** A URL shortening service and a link management platform via browser extension. Built using **Go, MongoDB & React**.