

# Omar Kamal

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## EDUCATION

### University of Alberta

*Faculty of Engineering, BSc in Materials Engineering*

2017 – 2023

*Edmonton, AB*

## TECHNICAL SKILLS

**Languages:** HTML/CSS, JavaScript, TypeScript, Go, C#, Rust, Python

**Frameworks:** Node.js, .NET, jQuery, JSX, Angular, React, Next, Vue, Nuxt, Astro, Express.js, Koa.js

**Databases:** SQL/MariaDB, MongoDB

**Tooling/Platforms:** Git, Docker, DigitalOcean, AWS, Vercel, bash, powershell, Postman, ESLint, Golang Testing, GitHub Actions, Figma

## EXPERIENCE

### Corsace | General Organizer + Lead Developer

[corsace.io](http://corsace.io)

2015 – Current

*Edmonton, AB*

- Successfully led a team of **100+ volunteers**, resulting in increased event frequency and **5000+ viewer** streams.
- Developed multiple websites and a central proxy API using **Vue + Nuxt, Koa.js, typeorm**, and **MariaDB** for running various Corsace projects.
- Containerized using **Docker** and deployed in an **AWS EC2** instance to smoothly run the websites in production.
- Implemented **OAuth**, enhancing user convenience by allowing seamless login across multiple platforms.

### Technical Assistant | Medical Records Bookkeeping

*Shifa Medical Clinic*

2014 – 2017

*Edmonton, AB*

- Maintaining the clinic's patient record database in **MySQL** to ensure data was clean, organized, and secure, and following protocols established via PIPEDA.
- Securely transferred patient records as necessary for referral clinics, hospitals, and pharmacies.
- Handled any database connection issues experienced by staff with regards to accessing and updating patient records.

## PROJECTS

### Difficulty Calculation Development

[osu.ppy.sh](http://osu.ppy.sh)

2017 – 2019

- Improved the game's difficulty calculation, leading to more balanced gameplay for **30 million+ users**.
- Developed in **C#** using **.NET Core** and **OpenTK**, and a small portion of **C++** to work on the difficulty calculation.
- Incorporated principles from Fitts' Law into the calculation, enhancing gameplay balance and challenge predictability.
- Ensure results were optimal by communicating back and forth with key stakeholders.

### Discord Chat Bot

[GitHub Link](#)

2019 – 2022

- Implemented a chat bot using **Go** in the social messaging platform Discord, which is used regularly by **1000+ users** across **200 servers**.
- Created a framework to simplify chat command creation.
- Deployed on **AWS EC2** using an automated **Buddy CI/CD** pipeline and **CloudWatch** to ensure high availability with **99%+ up-time**.