Omar Kamal

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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 | Software Developer   2015 – Current
corsace.io   *Edmonton, AB*
- Orchestrated a team of many developers and designers to build a platform for running gaming events, such as tournaments and award shows, for at least **5000+ concurrent users**.
- Developed multiple **open source 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.

Shifa Medical Clinic | Technical Assistant   2014 – 2017
shifamedicalclinic.com   *Edmonton, AB*
- Maintained and sanitized patient record database in **MySQL** to ensure **100% PIPEDA protocol compliance**, and **3x faster patient data retrieval** for doctors.
- Transferred patient records **in a secured manner** as necessary for referral clinics, hospitals, and pharmacies.
- Promptly managed various connection issues experienced by staff with **SQL databases and VPNs** and reduced connection issue rates by **10x**.

PROJECTS

Difficulty Calculation Development   2017 – 2019
osu.ppy.sh
- Developed and analyzed heuristic algorithms for difficulty estimation in an open source video game, leading to more balanced gameplay for **30 million+ users**.
- Developed in **C#** using **.NET Core** and **OpenTK**, and a small portion of **C++** to improve difficulty calculation infrastructure.
- Incorporated principles from Fitts' Law into the calculation, vastly enhancing gameplay balance and challenge predictability.
- Ensure results were optimal by communicating back and forth with various key stakeholders.

Discord Chat Bot   2019 – 2022
GitHub Link
- Implemented an open source chat bot using **Go** in the social messaging platform Discord, used regularly by **1000+ users** across many Discord servers.
- Created a streamlined chat command creation framework to easily create **100+ chat commands**.
- Deployed on **AWS EC2** using an automated **Buddy CI/CD** pipeline and **CloudWatch** to ensure high availability with **99.9%+ up-time.**

EDUCATION

University of Alberta   2017 – 2023
Faculty of Engineering, BSc in Materials Engineering   *Edmonton, AB*