CHARLES @ UNLAIR.COM

Software Developer

CONTACT

unlair.com
Québec, Canada
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SKILLS

Languages & Frameworks
Go | C# | **C++** | JavaScript | **Node.js**
TypeScript | WPF | **.NET** | Protobuf

Databases
PostgreSQL | MySQL

Tools & Technologies
Docker | Kafka | **AWS**
Oracle Cloud | Git | **Perforce**

EDUCATION

Bachelor of Science
Computer Science (3.54 GPA)
University of Calgary
September 2007 – April 2012
Calgary, AB

Freelance software developer with over 10 years of experience designing, developing, and optimizing high-performance backend applications and tools. Skilled in Go, C#, and C++, with a strong focus on scalable solutions, cloud platforms, and modernizing legacy systems. Proven commitment to improving workflows and delivering high-quality, maintainable code.

PROFESSIONAL EXPERIENCE

Freelance Software Developer

Self-employed | May 2023 – present | Remote

- Spearheaded the rearchitecture of a healthcare technology platform using **Go**, aligning it with modern software engineering principles and enabling seamless migration from legacy code.
- Identified and addressed process bottlenecks, resulting in improved product quality and development efficiency.

Backend Software Developer, Tech Lead

SwiftConnect | Nov 2021 – May 2023 | Montréal, QC (Remote)

- Built a **Node.js** Kafka wrapper module, facilitating efficient communication between core backend services and third-party integrations using **Protocol Buffers**.
- Specified and enforced **TypeScript** coding standards, ensuring code quality and consistency across the team.
- Led the development of several third-party integrations in **Go**, utilizing webhooks and **REST APIs**.
- Implemented a flexible payment platform integration in **Go**, with client access provided via HTTP endpoints.

Software Developer

Electronic Arts (Frostbite Animation) | Dec 2020 – Jul 2021 | Vancouver, BC (Remote)

- Reworked and supported legacy **WinForms** tech in a modern **WPF** context, including support for a robust hotkey system, a floating-window framework, and on-the-fly WinForms-to-WPF conversion, ensuring access to modern UI features while maintaining interoperability with existing tech.
- Delivered timely bug fixes and provided ongoing support in an unfamiliar codebase.

Software Developer

Electronic Arts (Frostbite Cinematics) | Jun 2013 – Sep 2018, Jan 2020 – Aug 2020 | Vancouver, BC

- Engineered a new **low-level GDI-based** rendering solution from the ground up to replace **WPF** rendering, exponentially enhancing performance and enabling artists to iterate on extremely complex and data-heavy scenes imported from third-party tools, accomplished while reducing long-term support costs and boosting extensibility.
- Designed and developed cutting-edge cinematic tools and workflows using **C#** and **C++**, including accompanying documentation and unit tests.
- Provided consistent and effective support for game teams' engineers and content creators under tight deadlines.
- Heavily optimized performance based on CPU and memory usage analysis, improving client workflows.

Software Developer

University of Calgary | May 2011 – Aug 2011, Aug 2012 – Jun 2013 | Calgary, AB

- Created a **platform-independent data format** and **C#** library for storing, accessing, and manipulating oil reservoir visualization data.
- Built file conversion tools for data conversion from multiple file formats to the new data format, including an ASCII-based parser written in **C++**, enabling support for multiple vendors.
- Created efficient data structures for interactive 3D visualization systems of oil reservoir simulation post-processing datasets and models.