JD Lien

Full-Stack Software Engineer
Edmonton, Alberta, Canada

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Versatile developer with over a decade in software engineering, UI design, and technical writing. Passionate about creating high-quality, secure software that offers excellent user experiences.

SKILLS

Languages & Databases
- PHP
- TypeScript / JavaScript
- Python / Java / C++ / C#
- MySQL / SQL Server
- ColdFusion / CFScript
- PowerShell / Bash Script

Frameworks & Libraries
- Laravel / Livewire
- Vue / React / jQuery
- CSS / Tailwind / Sass

DevOps & Best Practices
- Git / GitHub Docker
- AWS RDS / Azure
- Apache / Nginx / IIS
- Pest / PHPUnit / Vitest / Jest
- SOLID / Agile / TDD

EXPERIENCE

Freelance Developer
FullSpec Systems (Remote)

Aug 2022 – Present

- Created system to rapidly ingest GTFS transit datasets from cities into MySQL & Postgres DBs.
- Built JSON:API-compatible API with Laravel to serve transit data to web and mobile apps.
- Designed public library registration system using Docker for quick deployment and upgrades.
- Created articles for PlanetScale such as Upgrading MySQL to v8 and Using SQL Joins.
- Wrote technical articles for Readyset about implementing database caching in Laravel.
- Published NPM Package for frontend validation in TypeScript with 100% Vitest test coverage.

Lead Web Developer
Edmonton Public Library (Edmonton, Canada/Remote)

Nov 2019 – Apr 2024

- Conceived and led the successful migration to Laravel and Vue.js from the existing ColdFusion intranet with 60+ applications, enhancing robustness, user experience, and maintainability.
- Dramatically improved security by implementing OAuth 2 and MFA, extensive automated testing, rewriting DB queries with strict parameter-binding, reducing incidents by 90%.
- Established formal development practices including local dev environments, staging servers, dev databases, and rigorous version control practices using GitHub, reducing mistakes on production.
- Developed a system using database introspection to streamline CRUD interface creation across 50+ applications, reducing development time from weeks to hours for many apps, and centralizing code in a robust, well-tested library.
- Led a major refactor of a ColdFusion codebase, modernizing and simplifying over 3,000 files into 800, enhancing code quality with reusable components and reduced complexity.
- Mentored 3 junior developers through curated training materials, hosting training sessions, and pairing, fostering collaboration and enhancing skills across the team.

Web Developer   Apr 2012 – Nov 2019
Edmonton Public Library (Edmonton, Canada)

- Won Innovation Award for development and successful launch of Makerspace Booking System, which reduced customer booking complaints over 70% and reduced time staff spent handling bookings.
- Initiated and developed an error management system to log user-reported issues, collect detailed feedback, and notify developers, enabling proactive resolution and improved system reliability.
- Developed online registration system to automate customer account creation for 50,000+ customers, reducing staff time spent on manual account creation, while mitigating fraudulent account activity.
- Built CMS, form builder, APIs, and >30 other apps in response to organizational needs for about 900 staff using responsive design and accessible design.
- Demonstrated exceptional responsiveness by addressing issue reports and enhancement requests, often delivering solutions or upgrades within an hour on the same day.
- Optimized SQL Server database design and tuned queries, increasing database performance for slow queries up to 10x.

Freelance Developer/Systems Administrator   Sep 2011 – Apr 2012
FullSpec Systems (Edmonton, Canada/Remote)

- Developed web applications for small businesses.
- Created and administered WordPress and Drupal sites.
- Managed network infrastructure, DNS, and email systems.
- Administered Linux and Windows servers and workstations.

Technical Copywriter   Jan 2010 – September 2011
Opera Software (Oslo, Norway)

- Wrote content for Opera blogs about web standards and browsers.
- Collaborated with developers and product team to write documentation.
- Planned and wrote marketing copy for 18 product launches and major updates.
- Won international blogging competition, with posts selected from over 300 submissions.

EDUCATION

Computing & Information Systems   2015 – 2021
Athabasca University

Graduated with distinction. Capstone project involved a complex Laravel & Livewire-based video game.

Business Analyst Certificate   2007 – 2008
Northern Alberta Institute of Technology

Developed requirements gathering, project documentation, and quality assurance skills.

Cisco Certified Network Associate (CCNA)   2007