

JD Lien

Full-Stack Software Engineer

Edmonton, Alberta, Canada

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📁 [Portfolio](#)

🐙 [GitHub](#)

🌐 [LinkedIn](#)

Versatile developer with over a decade in software engineering, UI design, and technical writing fields. 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

Aug 2022 – Present

FullSpec Systems (Remote)

- 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

Nov 2019 – Apr 2024

Edmonton Public Library (Edmonton, Canada/Remote)

- 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 and reduced staff time handling bookings over 70%.
- 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

Certified in networking fundamentals, routing, switching, and Cisco IOS administration.