Crystal Hansen

Professional Profile

Experienced **Full-Stack Developer** with over **18 years** in web and application development, data analysis, system integrations, and migrations. Adept at building and maintaining scalable, high-performance applications in **Angular, React and TypeScript frameworks, Java, Python, Flask, .NET, C#, Drupal, PHP**. Passionate about **problem-solving, automation, and optimizing system performance**. Extensive experience in API integrations, database architecture, and secure web infrastructure.

Technical Skills

- **Programming Languages:** Java, TypeScript, Node.js, Python, PHP, .NET (C#, VB)
- **Web Development:** Angular.js / Angular 2/ React/TypeScript / HTML5, CSS3, Bootstrap,
- **Backend & APIs:** Drupal/PHP, WebAPI, Spring Boot, JDBC, RESTful APIs, SOAP
- **Database Management:** MySQL, PostgreSQL, SQL Server, MariaDB,SAS EG
- **Content Management & Migrations:** Drupal, Wordpress, custom modules, SEO file optimizations, Google Search Console, GTM, LinkedIn/Google ads
- **Mobile Development:** iPhone development, (Swift, Objective-C)
- **Server & Deployment:** Tomcat, Catalina, Apache, Nginx, Docker, Ubuntu, Unix, Linux
- **Security & Optimization:** DKIM, SPF, OAuth,Basic Authentication, Role Base Access
- **Version Control & CI/CD:** Git, GitHub, GitLab, TFS, Drush, Composer, Agile methodologies

Experience

FREELANCE DEVELOPER, CRYSTAL HANSEN ARTOGRAPHIC; CANADA 2013-Present

Personal Projects & Self-Initiated SaaS Applications (2019 – 2021, 2025)
Consistently developed projects to stay current with modern web, backend, cloud and AI technologies.
Current work - March 2025 - present

- **crystalhansenartographic.com Developed a full-stack web portfolio and booking platform** using **React** (**Vite**, **TypeScript**), **Node.js** (**Express** + **Cron**) Server backend included, and a **PHP API** backend for production server. Integrated dynamic image galleries, product listings, and studio scheduling with automated daily data generation and **SEO** optimization using **React Helmet** and .htaccess routing. View here: crystalhansenartographic.com Visit GitHub: chartcom , PHP-API
- **AI/NLP Chatbot SaaS** – Developed a micro-service chatbot using **Spring Boot**, **Spring MVC**, **OpenAI GPT API**, and **AWS EC2** deployment. Focused on emotional support and custom fortune-telling prompts. Github: fortune-ai (Oribie AI) available at pinmento.com web based bottom right.
- **Data Trend Generator** Python sales generation tool designed to mimic current sales trends in photography for mock data used in a Drupal dashboard, Github: user_profile_account , Python flask-generate-sales
- **Bookit App Platform**: Refactoring of past booking system of 2019, angular.js calendar booking, cart functionality into **Maven**, **Spring Boot**, **Spring**, **Java API** application, GitHub: Bookit to inject website bookings in a centralized platform. Cloud platforms **AWS EC2, RDS** / **Google** Cloud Technologies.

WEB DEVELOPER (FULL-STACK), PGSTECH; — March 3, 2021 - April 4 2025 | Montreal, QC

- Developed and maintained **emtp.com** (PHP) with optimized performance and security.
- Coded HubSpot and Website **data migrations & SEO optimizations**, ensuring URL consistency and file naming standardization.
- Stack Technologies used: **HTML**/CSS3/**Javascript PHP** / **Mysql**, Composer, Drush, Docker, Form testing
- Integrated **HubSpot APIs, Brevo API, PayPal gateway** using PHP within a Drupal framework for automated lead management coupled with forms and email marketing, deals and sales.
- Built **custom modules** for file handling, ratings, and email subscriptions.
- Optimized website **PHP/Drupal API performance**, resolved caching issues, and implemented **security best practices**.

Key Projects:
- **Star Rating System:** Migrated PHP-based ratings into structured Drupal. [Drupal Star Rating](#)
- **CRM Migration:** Designed and executed HubSpot data migration, licensing api integrations and workflows. Visit: [Hubspot Migration](#)
- Drupal **CMS Migration:** Designed and executed website data migration content types and custom module integrations. Visit [emtp-drupal](#)
- **Brevo API Integration:** email marketing campaigns with API automation.
- **In-App Advertising API:** Developed secure EMTP-based monetization tools. See public example: [PHP-API](#)

FREELANCE DEVELOPER, CRYSTAL HANSEN ARTOGRAPHIC; CANADA 2019-2021

Freelance Projects & Self-Initiated Applications (2019 – 2021)
Consistently developed projects to stay current with modern web technologies.
Past Work: Sept 2019-Feb 2021
- **Studio Booking & Rentals SaaS** – Designed and implemented a cloud-based application for managing studio bookings, rentals, and calendar views using **Angular (TypeScript v2+)**, **Java**, **Spring / Spring Boot**, and **Hibernate**. *Visit:* [studio Calendar](#)
- **Gallery & Portfolio Platform** – Built user-facing features for selling photo prints, showcasing work, and collecting client reviews. Tech stack: **Angular 2**, **Java**, **Spring Boot**, **Hibernate**.[gallery-loader](#)
- **Dynamic Gallery Display** – Created masonry layouts for image galleries with **lazy loading**, using **vanilla JavaScript** and **Java**, **Spring** for the backend.
- **Data Analysis Tool** – Built a screen scraping and analysis tool for extracting industry data to support marketing decisions using **Python**, **MySQL**, and **BeautifulSoup**. [python](#)

CANADIAN WESTERN BANK   Dec 4 2011 – 2019 | EDMONTON, AB

Manager, IT Risk (2018 – 2019) — Java Developer
- Developed credit risk models and scorecard **applications** using **Java**
- **Built Java applications** using JSP, Struts, JavaScript, AJAX, SAS backend
- Designed Bug/Developer ask tracking system JSP, Spring, Hibernate
- Developed one-page UI forms for scorecards (HTML, CSS3, Javascript)
- Worked directly on backend (JDBC, SQL) and frontend (JavaScript, AJAX)

IT Risk Analyst (2016 – 2018) — Java Developer
- **Designed real-time financial data pipelines for risk analysis and forecasting.**
- Built **risk assessment applications** using **Java, SQL**, and **REST APIs**.
- Developed data analysis and model validation for regulatory compliance.
- **Built Java applications** using JSP, Struts, JavaScript, AJAX, SAS backend
- **Scorecard Systems:** Engineered **quantitative and qualitative scorecard applications**, integrating automated risk rating logic and real-time data processing.
- **Backend Development:** Developed and optimized **JDBC-based SQL queries** for **Oracle/MySQL**, ensuring efficient data retrieval and storage.
- **Task & Bug Tracking System:** Built a **custom task tracking system** in **Java (JSP)** with a **parent-child** structure for seamless workflow management following Agile methodologies.
- **Front-End Development:** Designed **AJAX-driven, single-page data entry forms** for streamlined user experience and faster data input.
- **Testing & Debugging:** Conducted unit testing, performance tuning, and troubleshooting to ensure application stability and efficiency.
- Nominee Pillar Award Q3 Achievement Awards, Canadian Western Bank - 2017

Application Developer II (2013 – 2016)
- Developed various **Java & .Net** tools to support financial migrations **ETL** processes, **Multi-threading**, transactional log processing tools.
- Develop **SQL SSIS** Testing and deployments for a Temenos T24 banking system migration, optimizing SQL for go-live processing.
- **Transformations** created using SSIS .NET tools to transform Accounts, Terms, Transactional Data types in new T24 Standards

Education
Northern Alberta Institute of Technology, Edmonton AB — **Computer Systems Technology**, 2009

University of Saskatchewan, Saskatoon, SK - **BA,** 2002-2005

Reference:
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