



Kjartan Einarsson

Senior Software Engineer
Forritun Software Ltd

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Profile

Kjartan Einarsson is a Senior Full Stack Software Engineer and DevOps Specialist with extensive experience delivering digital services for the BC Government and enterprise clients. With deep expertise in Vue 3, TypeScript, Vite, and Node.js on the front end, and Python, PostgreSQL, and RESTful/OpenAPI-based services on the back end, Kjartan excels at architecting scalable, containerized applications deployed on OpenShift-native platforms. His hands-on work with OpenShift 4.x, GitOps/IaC, Docker, Helm, and GitHub Actions CI/CD pipelines—across multiple BC Government initiatives including SIMS, NERT, and the Digital Trust platform—positions him as a strong technical advisor for DevOps-driven teams building modern digital services.

As a senior developer and mentor, Kjartan has guided 2–4 developers through pair programming, code reviews, and structured learning sessions, establishing psychological safety and collaborative problem-solving practices. He has collaborated closely with Product Owners, UX/design roles, and Scrum Masters to create user stories, refine backlogs, and deliver outcomes aligned with stakeholder needs. Experienced in communicating technical concepts to non-technical audiences, Kjartan brings a coaching mindset, delivery focus, and broad full-stack and DevOps expertise to cross-functional, Agile environments.

Skills

Core Languages

- JavaScript / TypeScript
- Python
- Java
- C / C++

Front-End Development

- Vue.js (Vue 3)
- Nuxt.js
- Vite
- React
- React-Native
- Next.js
- Angular
- Tailwind CSS
- PostCSS / CSS Modules
- Material-UI
- Shad-CN
- HTML/CSS

Back-End Development

- Node.js
- Python
- Flask
- Django
- Express
- Fast-API
- RESTful APIs / OpenAPI 3.x

Database Management

- PostgreSQL
- MySQL
- MongoDB
- DynamoDB
- Redis
- RabbitMQ

DevOps and Deployment

- OpenShift 4.x
- Docker
- Kubernetes
- GitOps / IaC
- Helm
- GitHub Actions
- CI/CD Pipelines
- Azure Kubernetes Cluster

Version Control and Testing

- Git
- Mocha
- Jest
- Cypress
- Selenium
- JMeter
- Automated Testing

Leadership and Mentoring

- Team Mentoring and Development
- Code Review and PR Processes
- Agile/Scrum Methodologies
- Technical Best Practices Coaching
- Cross-functional Team Collaboration

System Administration and Network Management

- Network Management
- Raspberry Pi Development
- Arch Linux
- Debian

Delivery Methodologies

- Agile Methods
 - Scrum
 - Hybrid Agile
 - Waterfall
 - Predictive
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Professional Experience

Quartech Systems Ltd

September 2020 – Present

BC Government, Digital Trust – TDAC (CITZ: EX)

Oct 2025 – Present

BCGOV – BC Wallet Mobile (BCSC: B.C. Services Card)

Senior Full Stack Developer

Working with the CDT (Credential and Digital Trust) team as part of the Integrated Identity Services (IIS) initiative, developing the BCSC (BC Services Card) app and integrating BC Wallet into the BC Services Card experience. Delivering mobile UI, security flows, and backend integration for Android and iOS so citizens can manage digital credentials and access government services in one app.

- Designed and implemented “ScreenWrapper”, a common Bifold component for consistent screen sizing/layout; integrated it across every screen in bc-wallet for unified safe area and scroll
- Implemented BCSC account nickname (create, edit, selection) and persistence to the IAS backend
- Built verification and onboarding flows: setup steps, resume verification, verification approval notifications, and device invalidation / forced de-registration
- Introduced global error handling and consistent alert styling; improved safe area, scroll behavior, WebView scaling, and help/verify-in-person links
- Added i18n support for all BCSC v4 screens
- Improved CI with GitHub Actions for ledgers on PR and SonarCloud

Technologies: React Native, TypeScript, Bifold (wallet core), Credo-TS (verifiable credentials), Jest, ESLint, Prettier, Yarn workspaces, GitHub Actions, SonarCloud, Swift (iOS), Kotlin (Android)

Quartech Digital Trust Services – (QDTS)

Oct 2024 – Oct 2025

Senior Full Stack Developer

Internal SaaS development for Quartech: Digital Trust Services develop and implement blockchain-based solutions that enable organizations to establish self-sovereign identities and issue, hold, and manage digitally verifiable credentials. These services enhance security, streamline operations, and support government and business entities' digital transformation efforts. Kjartan's responsibilities include:

- Led development of enterprise-scale web applications using React, Node.js, TypeScript, and Kubernetes with a focus on scalability, security, and performance
- Designed and implemented Helm charts and GitHub Actions workflows for five applications in Quartech's Azure Kubernetes Cluster
- Organized the repository by restructuring front-end and back-end components
- Created Docker files for development and production environments for all applications
- Streamlined production deployment by optimizing npm and Yarn packages
- Migrated the API database from AWS DynamoDB to a self-hosted Bitnami chart MongoDB image connected through a Helm chart dependency
- Developed a full Issuer Demo repository, specifically the admin control panel for tenant invitations and user credential management with Keycloak OpenID Connect (OIDC)
- Implemented Keycloak tags to restrict Admin access to Issuer Pages only
- Updated front-end applications to integrate Keycloak OIDC context
- Automated CI and CD pipelines for application deployment and maintenance, notably three repositories and five containers with full CI and CD support

Technologies: Helm, OpenShift, Kubernetes, Azure Kubernetes Cluster, TypeScript, Node.js, Docker, GitHub Actions

NERT is a Geographic Information System (GIS)-based web application developed to support restoration efforts in BC's Northeast Natural Resource region. NERT has been expanded to cover all regions of BC, addressing ecosystems that include forests, wetlands, and coastal areas. The application provides interactive map features for visualizing projects, allowing stakeholders to understand spatial distribution and comprehensively track restoration efforts. Kjartan's responsibilities include:

- Provided pivotal support to developing and deploying the NERT application to OpenShift-native environments (DEV/TEST/PROD) using GitOps/IaC practices
- Implemented test automation frameworks (unit, integration, end-to-end) using Mocha, Jest, and Cypress
- Worked effectively with multidisciplinary teams, including Product Owners, Scrum Masters, and Compliance specialists, to create user stories, refine backlog items, and deliver shared outcomes
- Led development of enterprise-scale web applications using React, Node.js, TypeScript, and OpenShift 4.x with focus on scalability, security, and performance
- Redesigned RESTful API systems following OpenAPI conventions, with layered architecture for endpoints, services, and repositories
- Wrote initial database migrations at the DEV, TEST, and PROD stages of development
- Modified Helm charts, YAML manifests, and ENV variables for OpenShift-native deployments
- Integrated authentication and verification throughout the project (OAuth)
- Designed and optimized PostgreSQL for performance, indexing, query optimization, schema design, and migration strategies
- Contributed to open-source and inner-source codebases, promoting reusable patterns, shared libraries, and collaborative coding standards

Technologies: React and Material-UI, Node.js, TypeScript, Git, PostgreSQL, Docker, OpenShift, Mocha, Jest

Species Inventory Management System (SIMS)/BioHub (BIOHUB)

Dec 2021 – Apr 2024

Senior Full Stack Developer

SIMS (also referred to as BioHub) is a digital transformation initiative to centralize and modernize the management of aquatic and terrestrial species and habitat data in BC. This project streamlined data collection, management, and sharing processes to enhance data accessibility and decision-making capabilities for biologists, consultants, and government agencies. The system integrated multiple legacy systems into a unified platform to improve environmental management and policy development. Kjartan's responsibilities included:

- Led development of enterprise-scale web applications using React, Node.js, TypeScript, and OpenShift with focus on scalability, security, and performance
- Redesigned API systems with layers for endpoints, services, and repositories to adhere to a more streamlined structure
- Wrote database migrations at the DEV, TEST, and PROD stages of development
- Modified Helm charts, YAML manifests, and ENV variables for OpenShift-native deployments
- Integrated authentication and verification throughout the project (OAuth)
- Implemented test automation frameworks (unit, integration, end-to-end) using Mocha and Jest
- Developed savers and parsers for CSV, XML, and XLS files
- Constructed the email and phone notification app GC Notify
- Created a front-end map using Leaflet
- Completed development and migration from TEST-PROD and DEV-TEST

Technologies: React/Material-UI, NodeJS, TypeScript, Git, PostgreSQL, Docker, OpenShift, Mocha, Jest

Habitat Restoration Tracker (HRT)

Jan 2023 – Apr 2023

Senior Full Stack Developer

Kjartan served as a full-stack developer during the foundational development phase of the HRT project. This critical project developed a platform aimed at managing restoration efforts across BC. Kjartan's responsibilities included:

- Assisted in the redesign and integration of the RESTful API system
- Implemented test automation frameworks (unit, integration, end-to-end) for back-end and front-end testing
- Established the initial project setup and development lifecycle
- Integrated scientific data to deliver a transparent and comprehensive overview of land-based restoration activities

Technologies: React and Material-UI, Node.js, TypeScript, Git, PostgreSQL, Docker, OpenShift, Mocha, Jest

Ministry of Agriculture and Food

Sep 2020 – Dec 2021

Investment Agriculture Foundation (BuyBC)

Full Stack Developer

This project was developed to demonstrate the issuance of verifiable credentials to organizations in OrgBook BC. BuyBC uses the OrgBook DEV API for search functionality, allowing users to issue a BuyBC credential linked to an organization's BC registration ID. Kjartan's responsibilities included:

- Built and iterated on Vue.js front-end features for the BuyBC issuer and verifier applications, applying component-based architecture and TypeScript for type safety
- Implemented a user feedback form and optimized search bar interactions for improved UX
- Collaborated with stakeholders to refine UI requirements and deliver responsive, accessible front-end updates
- Assisted in the migration of the BuyBC application to IAF servers, updating Docker configurations and environment variables for the target environment

Technologies: Vue.js, TypeScript, Docker, Git

SYNQ

Jun 2020 – Dec 2020

Full Stack Developer

SYNQ is a technology company specializing in providing real-time integration and analytics solutions. The SYNQ platform facilitates seamless data synchronization across different sources, enabling businesses to make informed, strategic decisions based on the most current information available. Kjartan's responsibilities included:

- Designed and updated the company's website
- Developed and installed a network check-in software for company assets and devices
- Developed a prototype for a remote access locker system and wiring, soldering, and programming the device
- Provided technology resolution to clients through verbal direction
- Delivered in-person tech support for client devices and assets

Technologies: Python, MySQL, HTML, CSS, Network Management, Raspberry Pi Development, Arch Linux

Education

Bachelor of Software Engineering

University of Victoria | September 2017 – April 2024

Certifications

- **AWS Cloud Practitioner — Amazon Web Services | April 2024**
 - **OpenShift 101/201 — BC Government | April 2024**
 - **Certified Practitioner in Agile Development Practices**
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Awards

- **Victoria Lions Club Directors Scholarship**
 - **University of Victoria Entrance Scholarship**
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Personal Projects

Portfolio Website: KJ-HOME.CA / FORRITUN.DEV

- Designed and developed a personal portfolio website to showcase projects and ideas while experimenting with innovative web design.
- Incorporated **THREE.js** for interactive, visually dynamic experiences, emphasizing creativity and originality.
- Features a unique approach to presenting a portfolio, including resume details, project tracking, and blog functionality for documenting progress on various personal endeavors.

Music Production and Hardware Synth Design

- Currently designing and building hardware synthesizers, exploring innovative approaches to sound synthesis and music creation.