

# JAMIE POPKIN

## FULL-STACK SPATIAL DEVELOPER

GIS · GEOMATICS · WEB MAPPING

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### PROFILE

Full-stack spatial developer with **28 years** building GIS, geomatics, and web-mapping systems end to end — from PostGIS and Oracle Spatial databases and Node.js REST APIs through React, Vue, and SvelteKit map interfaces on Leaflet, OpenLayers, and MapLibre. Sole principal of **Little Earth Spatial Programming Inc.** (est. 2000), delivering production spatial web applications to the BC Government, Canadian natural-resource agencies, and international clients. Equally effective as a **GIS programmer / analyst** and a **GIS web-mapping developer**.

### CORE COMPETENCIES

|                               |                                                                                                                                           |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| <b>LANGUAGES</b>              | JavaScript (~20 yr), TypeScript, SQL / PL-SQL (~24 yr), Python, Perl, Bash, R, Elixir, Rust                                               |
| <b>FRONTEND &amp; MAPPING</b> | React, Vue, SvelteKit, Angular, D3; Leaflet, OpenLayers, MapLibre GL (3D), Turf, WMS / WFS / WFS-T, offline PWAs                          |
| <b>BACKEND &amp; DATA</b>     | Node.js / Express, Django, Phoenix, REST / WebSockets; PostgreSQL, Oracle Spatial, GeoServer, Martin; ETL, spatial SQL & network analysis |
| <b>GIS / GEOMATICS</b>        | PostGIS, ArcGIS / ArcInfo / AML, QGIS, GDAL / OGR, GRASS, FME, CARIS; DEM & terrain modelling, vector tiles, zonal statistics, H3         |
| <b>DEVOPS / CLOUD</b>         | Linux (~24 yr), Docker, OpenShift, Kubernetes, AWS, GitHub Actions, Jenkins, CI/CD, Git (~9 yr)                                           |

### SELECTED WORK

#### BC Road Value Assessment / Forest Engineering

2018–2026

BC Ministry of Forests · sole developer · 3,750+ hrs

Flagship engagement: provincial-scale DEM and road-network conflation and optimization analysis in PostGIS, a bridge-asset “network-crawl” tool, and a forest-engineering web dashboard modernized to a SvelteKit / MapLibre vector-tile stack.

> [PostGIS](#) > [SvelteKit](#) > [TypeScript](#) > [MapLibre](#) > [Node.js](#)

#### Mines Digital Trust

2022–2023

BC Ministry of Energy & Mines — via Quartech · full-stack · 2,862 hrs

Digital-trust and compliance platform for the BC mining sector — WebRTC feature work, REST API enhancements, and knowledge transfer ahead of hand-off.

> [React](#) > [Vue](#) > [TypeScript](#) > [Python](#) > [OpenShift](#)

#### GlobalMaps — Multi-Country Telecom Planning Platform

2019–present

Research ICT Solutions · geospatial developer · international

Telecom-infrastructure planning platform across South Sudan, Namibia, Malawi, Uganda, Ethiopia and Kenya, with radio-propagation coverage dashboards, MapLibre 3D terrain, and viewshed computed in Rust / WebAssembly.

> [SvelteKit](#) > [MapLibre](#) > [PostGIS](#) > [Martin](#) > [Rust/WASM](#)

#### BC Invasive Species Platform (InvasivesBC)

2020–2022

BC Ministry of Environment — via Quartech · full-stack · 1,798 hrs · 179 commits

Province-wide invasive-species tracking system: field-data mobile app, administrative portal, GeoJSON coastline processing, and Metabase reporting.

> [React](#) > [OpenLayers](#) > [TypeScript](#) > [GeoServer](#) > [PostGIS](#)

#### BC Telemetry Warehouse (BCTW)

2020–2021

BC Ministry of Forests — via Quartech · full-stack / DB · 301 commits

Wildlife GPS-collar telemetry data warehouse: database endpoints, authentication alignment, and React-Hooks state migration.

> [React](#) > [Vue](#) > [Leaflet](#) > [Node.js](#) > [PostGIS](#)

## Northeast Restoration Tracker (NERT)

2024

BC Ministry of Environment — via Quartech · full-stack · 1,207 hrs · 61 commits

Environmental-restoration tracking and reporting system: search API, MapLibre performance tuning, and React-Hooks render optimization.

> [React](#) > [TypeScript](#) > [MapLibre](#) > [Node.js](#)

## Variable Speed Limit Sign (VSLS) & MoTI Corporate Spatial Web

2012–2021

BC Ministry of Transportation & Infrastructure · full-stack · spatial web

Real-time highway variable-speed-sign monitoring API (WebSocket stream, HA-clustered) and long-running DriveBC and corporate spatial-web maintenance, including replacing a licensed Internet Mapping Framework with an open-source stack.

> [Node.js](#) > [OpenLayers](#) > [PHP/Slim](#) > [GeoServer](#) > [Oracle](#)

## BC LNG Portal

2019–2020

BC Gov Exchange Lab — via Quartech · full-stack · 142 commits

Public LNG-project tracking and engagement portal with document management and public mapping.

> [Angular→React](#) > [Leaflet](#) > [Node.js](#) > [PostGIS](#)

## New Zealand Spatial Platforms

2010–2024

Lat37 Ltd. / Keewai · full-stack · private sector

Commercial spatial web applications: Catch Analyst lobster-fishery monitoring (millions of records), a Manuka-honey hive-management tool with real-time field data, and an offline-capable crayfish field-data PWA.

> [Node.js](#) > [PostGIS](#) > [AWS](#) > [D3](#) > [Leaflet](#)

**Also** — MoTI Transportation Web Map & feature tools; Commercial Transport Hub, AR Pathfinder, BiohubBC, Family Protection Order (via Quartech); Yellow Cedar decline terrain modelling and Forest Bridge analytics (BC Forests); DataBC Data Mashup Framework web maps & Geocoder Widget; Organics Info, Cowichan Lake species map, and Nature-Based Solutions GIS (BC Conservation Foundation); national telecom-coverage mapping for African regulators (MACRA, NITA-U, CRAN).

## EARLIER · 1997–2011

Foundation in enterprise GIS, spatial modelling, and automated cartographic production on ArcInfo / Oracle / UNIX. Sustained GIS analysis and web-mapping for the **Integrated Land Management Bureau / GeoBC** and BC natural-resource ministries (2003–2011; invoiced records document 40+ discrete task contracts) — LRMP / Land-Use-Plan analysis, AML-automated map production, Spatial Overlay Engine and tile-cache work, ARCLIB→Oracle SDE migration, and wildlife-habitat modelling. Earlier: the **Queen Charlotte Islands (Haida Gwaii) Land Use Plan** atlas, **Land & Water BC** regional GIS standards, and hydrographic charting in **CARIS** for the **Canadian Hydrographic Service (DFO)**.

## EDUCATION

### BSc, Geography & Biology

University of Victoria · 1995–1999

### Diploma of Technology, Environmental Science

Camosun College · 1993–1995

Technical Author, Linux Journal (2010–2011) · References available on request