Tom Horne

Software Engineer (Full-Stack) — Systems, Testing & Automation

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Summary

Frontend and full-stack engineer focused on reliable, testable web systems and workflow automation. Experienced building production applications with modern JavaScript frameworks, backend APIs, and CI-driven testing pipelines. Strong focus on maintainable architecture, operational clarity, and automation-first workflows, with hands-on experience in data-driven and financial research tooling.

Skills

Frontend
React, Next.js (App Router), TypeScript, Tailwind CSS, accessibility-aware UI

Backend / Full-Stack
Node.js, REST APIs, Supabase (Postgres, RLS), authentication, audit logging
Python, FastAPI

Automation & Tooling
n8n workflows, GitHub Actions, CI pipelines, local & cloud tooling, MCPs, Subagents

Testing & Quality
Test-Driven Development (TDD), Playwright/Puppeteer/Selenium, regression & smoke testing, schema validation (Zod), TypeChecks

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Projects

Outdoor Management System (OMS) — Full-Stack Web Application

Next.js, TypeScript, Supabase, Playwright

- Designed and built a calendar-driven resource booking platform for administrative and operational workflows
- Enabled administrators to manage bookings, availability, and operations in a single system, reducing manual coordination and error-prone workflows
- Implemented row-level security (RLS), role-based access control, and audit logging
- Built end-to-end booking and availability flows with automated E2E test coverage
- Structured the system for maintainability and future expansion while keeping MVP scope controlled

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Workflow Automation & Internal Tooling

n8n, APIs

- Designed automation pipelines to orchestrate data ingestion, processing, and system coordination
- Reduced manual operational effort by automating repetitive and failure-prone workflows
- Implemented explicit error handling, retries, and observability for production reliability

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Financial Research & Backtesting Tooling (In Progress)

Python, FastAPI, RAG pipelines, LLM tooling

- Designed a research-first backtesting system emphasizing reproducibility, auditability, and safe iteration over live-trading risk
- Building a retrieval-augmented system to improve research accuracy and context awareness
- Focused on reproducibility, testability, and safe iteration rather than live trading risk

Professional Experience

Tata Consultancy Services (TCS) — Frontend Developer / QA Automation

Kelowna, BC. - August 2021 – November 2023

- Built, tested, and maintained frontend components for enterprise web applications
- Assisted with automated testing using Selenium WebDriver, and Selenium Grid
- Improved coverage for UI, E2E, functional, regression, and cross-broswer testing
- Worked within large, distributed teams following formal delivery and QA processes

WestGrid Canada — Junior Frontend Developer

Kelowna, BC. - April 2020 – June 2021

- Developed and maintained frontend features using HTML, CSS, JavaScript, and React
- Collaborated with backend and infrastructure teams to integrate APIs and data services
- Contributed to UI improvements and bug fixes in production web applications
- Gained experience working within established codebases and delivery processes

Financial Consultant

Prior Experience - Investors Group Wealth Management

- Worked with clients on financial analysis and decision-making
- Developed an understanding of markets, risk, and financial workflows
- This background informs current work on financial research and backtesting tooling

Education

Bachelor of Science — Computer Information Systems
Okanagan College, Canada — 2020

Canadian Securities Course
Canadian Securities Institute

Mutual Funds Dealer
Canadian Investment Regulatory Organization

Availability

Currently accepting freelance projects (small to mid-size). Particularly well-suited for internal tools, dashboards, admin systems, and automation-heavy workflows.