

Brent Rockwood - CV

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Principal / Staff Software Engineer · Security & Systems Architect

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- <https://github.com/brentrockwood>
- <https://rockwoodlab.com>

SUMMARY

Principal-level software engineer with **30+ years of experience** designing, building, and securing complex systems across **finance, cybersecurity, identity governance, and SaaS**. Proven record delivering **mission-critical platforms** used by executive leadership, regulators, and enterprise security teams.

Deep expertise in **Virtualization, Linux systems, Python, Node.js, TypeScript, React, and Large Data Systems**, with prior experience spanning **kernel-level development, identity systems, and data governance platforms**. Known for translating ambiguous requirements into reliable, maintainable systems and operating effectively at the intersection of **engineering, architecture, and security**.

CORE SKILLS

Languages & Runtimes

Python, TypeScript, JavaScript, Node.js, C#, C++, SQL

Frontend & APIs

React, Redux, REST, Tailwind, AngularJS (legacy)

Backend & Data

PostgreSQL, MS SQL Server, SQLite, QDrant, MongoDB, Redis, MySQL, GraphQL

Cloud & Infrastructure

Linux, Docker, Devpods, AWS (Elastic Beanstalk, EC2, S3, RDS), CI/CD, Nginx

Security & Systems

RBAC, IAM integrations, data governance, compliance reporting, Windows kernel development (historical), NTFS, identity lifecycle management

PROFESSIONAL EXPERIENCE

Rockwood Lab — *Principal Engineer / Founder*

2024 – Present

- Founded and operate Rockwood Lab, an independent engineering practice focused on **applied R&D, systems architecture, and full-stack delivery**.
- Led multiple **contract engagements** delivering production **React/TypeScript applications**, including integration of **billing and payment systems** into client platforms.
- Conduct ongoing **R&D in AI-assisted developer tooling and operations**, including:
 - Porting and adapting frameworks such as Karpathy's autoresearch and NVIDIA Open-Shell/NemoClaw to run on local LLM infrastructure
 - Designing Python-based ingestion and orchestration pipelines with human-in-the-loop workflows
 - Agent-assisted documentation and operational co-pilots for complex infrastructure
 - Vector-database-backed knowledge systems for technical documentation and runbooks
- Designed and implemented full-stack systems using **React, Node.js, TypeScript, GraphQL, SQL**, and modern CI/CD pipelines.
- Served as **technical lead and architect** owning requirements, system design, implementation, and delivery end-to-end.

Tech: Python, Go, Rust, React, TypeScript, Node.js, GraphQL, SQL, Docker, Devpods, AI tooling, infrastructure automation

Wells Fargo — *Vice President, Lead Information Security Engineer*

2019 – 2024

- Architected and owned a **suite of internal security platforms** used to ingest, normalize, and visualize enterprise-wide cybersecurity and compliance metrics.
- Designed **event-driven data pipelines** in Node.js and TypeScript feeding **GraphQL APIs** consumed by executive dashboards and federal oversight teams.
- Implemented **delta-sync, partial-query caching, and resolver optimization**, significantly reducing latency and payload size under load.
- Led cross-team design reviews to harden **authentication, RBAC, and service-to-service API security**.
- Systems supported **CISO-level reporting** and ongoing regulatory scrutiny at enterprise scale.

Tech: Node.js, TypeScript, React, Redux, GraphQL, MS SQL Server, Jenkins, Nginx

TEKsystems — *Senior Software Engineer*

2017 – 2019

- Delivered full-stack features for **Fortune 50 retail and financial clients**, supporting high-throughput transactional workflows.
- Optimized GraphQL resolvers and query batching strategies.
- Refactored legacy Redux middleware into typed, normalized slices, improving maintainability and developer velocity.
- Built centralized logging and diagnostics pipelines.

Tech: Node.js, TypeScript, React, Redux, GraphQL, MS SQL, Elasticsearch

Soltech — *Senior Backend Developer / Technical Lead*

2016 – 2017

- Led backend development for **automotive logistics and airline service platforms**.
- Designed and deployed stateless microservices on AWS Elastic Beanstalk.
- Implemented PostgreSQL transaction strategies and connection pooling to reduce deadlocks under concurrency.
- Managed a small engineering team and reported directly to executive leadership.

Tech: Node.js, TypeScript, PostgreSQL, Docker, AWS

Independent Consultant

2001 – 2016

Selected engagements:

- **Identity Governance & IAM Integrations** — Cenovus Energy, State of Colorado
Built bidirectional identity lifecycle connectors integrating Quest One Identity Manager, Google Workspace, and enterprise service desks.
- **Enterprise AngularJS Component Library** — Liberty Mutual
Developed reusable UI components interfacing with large Java-based REST backends.
- **Municipal Election Reporting Platform** — City of Halifax
Designed real-time vote aggregation system with fault-tolerant mobile ingestion.
- **Bitcoin Mining Marketplace** — GAW Miners
Built Node.js backend services supporting cloud-based mining rentals and marketplace operations.

Quest Software / Dell Software — *Senior Software Engineer*

2004 – 2012

- Co-developed multiple commercial identity and governance products, including:
 - Quest One Identity Manager (Data Governance Edition)
 - Quest Group Policy Manager
 - Quest Archive Manager
- Implemented backend services **and a Windows kernel minifilter driver** to audit and intercept filesystem access.
- Reverse engineered the Microsoft Group Policy internal structure and implemented an XML-based system to report differences between versions.
- Managed regression testing, installer packaging, and enterprise deployment tooling.
- Worked as a member of a team practicing what was, at the time, the new Agile/Scrum methodology.

Tech: C#, C++, Windows Kernel APIs, NTFS, ADSI, MS SQL Server

Earlier Career

Software Engineer / Systems Analyst — Mount Sinai School of Medicine (1997–1999)

Developed NIH-compliant clinical trial software and supported neurology research systems.

Hardware & Software Generalist — Rockwood Electronics (1990–1997)

Built custom PCs, performed forensic troubleshooting, and developed Access/VBA automation systems.

EDUCATION

Bachelor of Computer Science

Technical University of Nova Scotia

I completed two years of this program.