

# Nicholai Martinsen

San Francisco Bay Area, California

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## SUMMARY

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Full-stack developer with production experience architecting and delivering modern web applications. Proven ability to design systems from the ground up — from database schema to Docker infrastructure to React frontends. Experienced in migrating legacy systems to modern stacks and building scalable, containerized environments for real-world deployment.

## TECHNICAL SKILLS

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- **Languages & Frameworks:** Go (Goa), React 19, Node.js, Express, TypeScript, Python, SQL
- **Databases:** SQL Server, PostgreSQL, MySQL, MongoDB, Redis
- **Infrastructure:** Docker, Docker-in-Docker, GitHub Actions CI/CD, Linux, Nginx
- **Networking:** TCP/IP, BACnet protocol, Cisco infrastructure, Wireshark
- **Architecture:** REST API design, JWT authentication, microservices, IoT data pipelines

## WORK EXPERIENCE

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### Software Developer – Contra Costa County Public Works | July 2024 – Present

*Architecting and delivering internal tools for county-wide capital project management*

- Designed and deployed a full-stack application (Node.js → Go backend + React frontend) that streamlined capital project and real-estate request management across 20 county departments, serving 200+ users
- Replaced manual Word-based submission process with a secure, database-driven workflow, eliminating print-and-sort overhead for hundreds of annual submissions
- Led migration from Node.js to Go (Goa framework) to support scaling across every division with advanced permissions and role-based access
- Designed SQL Server database with stored procedures, triggers, and historical auditing
- Built Dockerized development and production environments with GitHub Actions CI/CD
- Created custom SQL migration tool for versioned schema updates across environments
- Implemented Redis caching and optimized backend performance for multi-department usage

### Software Architect – Perseeva | June 2025 – Present

*Brought in to replace critical architect role; own Docker infrastructure, deployment pipeline, and frontend modernization*

- Inherited uncontainerized deployment (bash scripts, systemd, manual RocksDB compilation per client) and designed Docker-based infrastructure to enable scalable, repeatable deployments
- Pre-compiled RocksDB into containerized database agents — eliminated client-side compilation requirement and reduced deployment friction from hours to minutes
- Docker infrastructure deployed in first production POC at a major international airport — live BACnet device data across Cisco switch infrastructure
- Built management console frontend in React 19 (TanStack Router, TypeScript, Vite 7, Tailwind CSS v4) with JWT authentication and protected routes
- Designed Docker-in-Docker development environment with 5+ containerized services and GitHub Actions CI/CD for automated image builds
- Upcoming: Sparkplug B protocol integration for IoT data pipeline standardization

### Self-Employed Contractor | June 2020 – Present

- Managed client relationships, project planning, and execution for residential remodeling projects
- Developed strong problem-solving, estimation, and client management skills

## EDUCATION

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**Bachelor's Degree in Computer Science** — California State University Monterey Bay (Fall 2025)

**Associate's Degree in Computer Science** — Diablo Valley College (Spring 2023)

**Certifications:** IBM z/OS Mainframe Practitioner • Enterprise Design Thinking Practitioner • Agile Explorer • IBM z Xplore • New Collar Professional Skills

## **PROJECTS**

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**Keybind Manager** — Desktop application (Python + Tkinter) for editing and transferring game configuration files between titles. Features file parsing, GUI design, and trigonometric FOV sensitivity synchronization.