ZACK NELSON

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Full-stack software engineer with contract and project experience building scalable web applications in React, FastAPI, and PostgreSQL. Published open-source tools on PyPI (1,000+ downloads). U.S. Marine veteran bringing disciplined execution, cloud deployment skills, and a track record of shipping production-ready software.

TECHNICAL SKILLS

Languages:	Python, JavaScript, TypeScript, C++, SQL
Frontend:	React (Vite), Next.js, Tailwind CSS
Backend:	FastAPI, Node.js, REST APIs, GraphQL
Databases:	PostgreSQL, SQLite
Tools/Platforms:	Docker, Git/GitHub, CI/CD (Render, Vercel), AWS (certification in progress)
Machine Learning:	YOLOv8, PyTorch
Security Clearance:	Secret Security Clearance (Inactive, U.S. DoD)

PROJECTS

Job Radar   Next.js, FastAPI, PostgreSQL | **Demo** | **GitHub**
- Built full-stack job aggregator crawling Greenhouse ATS and curated GitHub feeds across 100+ companies; enforced entry-level filters and normalization rules
- Implemented FastAPI + PostgreSQL backend with API integration, ingestion metrics, CSV export, and admin endpoints; automated nightly ingestion and cloud-based CI/CD pipelines for scalable, reliable deployments
- Developed Next.js + Tailwind frontend with advanced filters, analytics dashboards, pagination, provider visibility toggles, and robust error handling

Job Log   React, FastAPI, PostgreSQL | **Demo** | **GitHub**
- Deployed job tracker managing 200+ applications with tagging, analytics, CSV export, and progress dashboards
- Designed and tested REST APIs with FastAPI + PostgreSQL (Pytest unit tests); deployed to cloud platforms (Render, Vercel) using CI/CD pipelines, including Chart.js dashboards for analytics
- Implemented API key system to restrict write operations while allowing public read-only access, enabling secure collaboration

Commit Companion   Python | **PyPI** | **GitHub**
- Published Python CLI on PyPI (1,000+ downloads) that integrates with Git to auto-generate commit messages, boosting developer consistency
- Packaged with Flit and Git hooks, applying modern Python packaging and seamless Git integration

EXPERIENCE

Software Engineer (Contract)   Jan 2025 – May 2025 | **GitHub**
Cascade Stream Solutions   *Santa Rosa, CA*
- Collaborated with 3 engineers and client stakeholders to deliver YOLOv8 segmentation pipeline for hydrological modeling across 18k+ drone images
- Trained and tuned YOLOv8 models with accuracy gains over baseline; developed augmentation and cross-validation workflows to improve generalization
- Automated hydrological data extraction, reducing manual labeling needs and lowering reliance on costly geospatial platforms

Math Tutor   2023 – 2024
Private Tutoring   *Santa Rosa, CA*
- Tutored 10+ students in algebra and calculus, delivering 100+ hours of personalized instruction and strengthening communication skills

Military Police   2013 – 2018
U.S. Marine Corps   *Okinawa, Japan & South Carolina*
- Led and mentored 70 Marines with zero mission failures in high-pressure environments
- Managed systems safeguarding $4M+ in assets with 100% accountability through disciplined processes and compliance

EDUCATION

B.S. in Computer Science, Magna Cum Laude   GPA: 3.78 | Major GPA: 3.96
Sonoma State University, May 2025   *Rohnert Park, CA*