MICHAEL GARDNER

Principal / Senior Software Engineer
Scottsdale, AZ | mjgardner@abitofhelp.com
LinkedIn: linkedin.com/in/michaeljosephgardner
GitHub: github.com/abitofhelp

Core Skills

- Evolving: AI: automation workflows, device-to-cloud, integrating LLMs, IoT / Industrial IoT
- AI-Assisted Engineering: agentic workflows, AI agents (ChatGPT, Claude Code), code review & refactor planning, docs/runbooks drafting, prompt engineering, test generation
- Languages & Systems: Ada 2022, C, C#, Go (Golang), Python, Rust
- Cloud, Orchestration & Containers: AWS/GCP (familiar), Azure, Docker, Helm, Kubernetes (K8s), Linux, Terraform
- Open Source & Community: contributions on GitHub, license (MIT)
- Architecture: Distributed systems, Microservices
- Build & DevEx: Bazel, CI/CD, GitHub Actions, GPRbuild
- APIs & Networking: Ambassador/Emissary, GraphQL, gRPC, Linkerd2, NGINX, REST
- Serverless & Eventing: AWS Lambda (familiar), Azure Functions
- Security: Active Directory, Azure Key Vault, HIPAA, OAuth2, OIDC, Okta, SOC 2, TLS, X.509
- Data: Azure Data Services, Microsoft SQL Server, MongoDB Atlas, PostgreSQL, Redis
- Observability & Messaging: Azure Queues, Grafana, Prometheus, SendGrid

Professional Summary

Hands-on engineer who builds and operates production systems. Delivered a multi-tenant Azure/Kubernetes (K8s) platform on Linux in Go (Golang) for a geoinformatics SaaS, provisioned with Terraform (IaC) and extended via Helm. Cut CI/build times 77% via Bazel + GitHub Actions (remote caching, standardized pipelines). Deployed a secure gRPC service mesh (Linkerd2) with OIDC (Okta/AD) and end-to-end mTLS; SLO-driven observability. Experienced in regulated environments: HIPAA (contracting, pre-SaaS) and SOC 2 (Software Engineering Manager at a university). Open-source oriented; publish and maintain libraries/tools repositories in my GitHub account; active contributor to the Ada Library Repository. Implemented concurrent geospatial/photogrammetry processing optimized for mobile clients. Comfortable in C, C#, Rust, and Ada 2022 for performance- and reliability-critical components. Early-career decade in OT/industrial automation at Allen-Bradley (Rockwell Automation)—created PLC integration libraries used in mission-critical deployments (including the French Navy). Actively using AI agents (ChatGPT, Claude Code) to boost productivity, improve quality, and accelerate learning. Actively pursuing device-to-cloud (IoT / Industrial IoT) and applied AI (automation workflows, integrating LLMs). EE hobbyist; Licensed pilot; Amateur Radio Extra Class operator.

Professional Experience

Principal Software Engineer (B2B) — A Bit of Help, Inc.
Remote | 2019 – 2025

- Delivered a multi-tenant geoinformatics SaaS on Azure/Kubernetes (K8s) in Go (Golang); Dockerized services; autoscaling, zero-downtime deploys, cost/SLO guardrails.
- Provisioned and managed infrastructure using Terraform (IaC); installed and customized external applications with Helm.
- Cut CI/build times 77% via Bazel + GitHub Actions (remote caching, standardized pipelines).
- Deployed secure gRPC mesh (Linkerd2) with OIDC (Okta/AD) and end-to-end mTLS; added policy/secret management and staged rollouts.
- Instrumented the SaaS for Prometheus (SLIs) with scrape endpoints; tenant-aware Grafana dashboards; SLOs with actionable alerts and runbooks.
- Delivered concurrent geospatial/photogrammetry processing, optimizing throughput vs. storage for mobile clients.
- Built performance-critical components and clean Foreign Function Interface (FFI) seams in C, C#, Rust, and Ada 2022; profiled hot paths for predictable latency.
- Software Engineering Manager for three teams (~20 engineers); mentored on modern practices and advanced architectures.
- AI-assisted engineering: leveraged ChatGPT and Claude Code agents for scaffolding, complex refactors, unit/prop-test generation, PR descriptions, and runbook drafts; instituted safe-use practices (secret redaction, non-prod sample data).

Freelance Consulting Roles (via TopDevz, Surge)
Remote | 2015 – 2019

- Designed and delivered robust REST/gRPC/GraphQL APIs.
- Built automation and console tools for third-party integrations; collaborated in Agile environments.

Senior Solution Architect — Dell Technologies
Remote | 2013 – 2015

- Provided modernization strategies and distributed application designs for enterprise clients on Microsoft and Open Source stacks.

Selected Earlier Career Highlights

- Allen-Bradley (Rockwell Automation): 10-year tenure; created PLC integration libraries—published in product manuals and adopted across manufacturing; used by the French Navy (VME PLC battleship control).
- University of Alaska & startups: ERP-integrated systems, C API libraries, customer training, global field support.

Education

- Western Michigan University — B.S., Computer Science; Minors: Biomedical Science, Chemistry, Mathematics

Certifications & Licenses

- Amateur Radio — Extra Class (also Technician, General)
- Private Pilot — Instrument, Floatplane, Tailwheel