

# **MICHAEL GARDNER**

Principal / Senior Software Engineer

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## **Core Skills**

- AI integration: LLMs
- AI Accelerated Development: ChatGPT, Claude Code
- Languages & Systems: Ada 2022, C, C#, Go, Python, Rust
- Cloud, Orchestration & Containers: AWS/GCP (familiar), Azure, Docker, Helm, Kubernetes, Linux, Terraform
- Architecture: Distributed systems, Enterprise Architecture, Microservices, Embedded, Domain Driven Design, Clean/Hexagonal, IoT
- Build & DevOp: Alire, Bazel, CI/CD, GitHub Actions, GPRbuild
- 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, TLS, X.509
- Data: Azure Data Services, SQL Server, MongoDB Atlas, PostgreSQL, Redis, SQLite
- Observability & Messaging: Azure Queues, Grafana, Prometheus, SendGrid

## **Professional Summary**

- Actively using Agentic workflows using ChatGPT and Claude Code to boost productivity, improve quality, and accelerate learning.
- Hands-on engineer who architects, builds, deploys, and monitors production SaaS systems using Cloud platforms, resources, and services.
- Skilled engineer comfortable with low-level development, electronics, and embedded programming on STM32 boards.
- Actively pursuing experience with device-to-cloud (IoT / Industrial IoT) and applied AI (automation workflows, integrating LLMs, etc.).
- Allen-Bradley (Rockwell Automation): Global Senior Application Engineer, 10-year tenure; critical global field support; customer training; created PLC Ethernet, ERP, and VME C API libraries; published APIs in product manuals; APIs adopted by customers across manufacturing and mission-critical deployments by the French Navy (VME PLC battleship control).
- University of Alaska: Software Engineering Manager for three teams (~20 engineers); personnel development, project management, budgeting, and mentoring on modern practices and advanced architectures.

## Recent Open-Source Projects

ADA 2022 - alire.ada.dev		
Functional	author/maintainer	Crate for functional programming with SPARK safety
Hybrid_App_Ada	author/maintainer	Enterprise starter application with hybrid DDD/Clean/Hexagonal architecture
Hybrid_Lib_Ada	author/maintainer	Enterprise starter library with hybrid DDD/Clean/Hexagonal architecture
TZif	author/maintainer	Crate for parsing and querying IANA time zone information from TZif binary files (RFC 9636)
ZoneInfo	author/maintainer	Crate for time zone transformations and calculations using the IANA Time Zone Database
Go 1.25.3 - go.dev		
Hybrid_App_Go	author/maintainer	Enterprise starter application with hybrid DDD/Clean/Hexagonal architecture
Hybrid_Lib_Go	author/maintainer	Enterprise starter library with hybrid DDD/Clean/Hexagonal architecture
Rust 2021 - crates.io		
Adaptive-Pipeline	author/maintainer	Crate for a high-performance adaptive file processing pipeline

## Professional Experience

### Principal Software Engineer — A Bit of Help, Inc.

Remote | 2019-present

- Integrated two LLMs into an Ada 2022 CLI application to provide intelligent triage and escalation for file processing pipeline issues.
- Designed and delivered a multi-tenant, geoinformatics SaaS application on Azure/Kubernetes (K8s) in Go; autoscaling, zero-downtime deploys.
- Instrumented the SaaS application for Prometheus (SLIs) with scrape endpoints; tenant-aware Grafana dashboards; SLOs with actionable alerts and runbooks.
- Deployed secure gRPC mesh (Linkerd2) with OIDC (Okta/AD) and end-to-end mTLS; added policy/secret management and staged rollouts.
- 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).
- Delivered concurrent geospatial/photogrammetry processing, optimizing throughput and storage for mobile clients.
- Built performance-critical components in C, Rust, and Ada 2022.

### Senior Software Engineer (Freelance Contract Roles through TopDevz, Surge)

Remote | 2015–2019

- Designed and delivered robust REST/gRPC/GraphQL APIs and SaaS applications.
- Built automation and CLI 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.

## **Education**

- Western Michigan University — B.S., Computer Science; Minors: Biomedical Science, Chemistry, Mathematics; Extensive Physics and Electrical Engineering

## **Certifications & Licenses**

- Amateur Radio — Extra Class License
- Private Pilot — Instrument, Floatplane, Tailwheel