

Timothy Michael Varley

AI-Driven Cloud Engineer & Technical Lead

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Objective

Technical Lead and Cloud Engineer with over 15 years of experience, now pioneering **AI-Driven Development** and **Agentic Workflows**. My core philosophy centers on using advanced AI tools to amplify the capabilities of small, focused teams, enabling unprecedented velocity and innovation. I specialize in scalable distributed systems, extensive Infrastructure as Code (IaC), and empowering teams to take full ownership of the development lifecycle from architecture to delivery.

Core Innovation & AI Philosophy

- **AI-First Approach:** Committed to integrating AI agents into every stage of development, from code generation and refactoring to documentation and architecture, maximizing human creativity for high-level problem solving.
- **Agentic Workflows:** Expert in designing and implementing workflows where human engineers collaborate with autonomous AI agents to reduce boilerplate and accelerate delivery.
- **Focused Teams:** Proven track record of leading lean, agile teams that outperform larger organizations by leveraging automation and AI-driven efficiency.

Experience

BERT & UgMO Technologies

Technical Lead (Concurrent Roles)

King of Prussia, PA

February 2016 – Present

Technical Lead for two separate companies simultaneously, both delivering IoT solutions. **BERT** focuses on power usage management using SBC Edge devices managed via Balena; **UgMO** pioneers wireless soil sensor networks for turf watering optimization.

- **AI & Agentic Adoption:** Spearheaded the adoption of AI-assisted coding and agentic workflows, significantly increasing deployment velocity and code quality across both organizations.
- **Cloud-Native Infrastructure:** Designed and deployed scalable architecture using Docker containers, microservices, and extensive IaC to manage distinct environments for both companies efficiently.
- **DevOps & Automation:** Implemented automated CI/CD pipelines and Balena fleet management for edge devices, ensuring seamless updates and high availability for distributed sensor networks.
- **Optimization:** Managed systems serving millions of daily requests, ensuring high availability through architectural refinements and rigorous monitoring (Cloudwatch).
- **Security Leadership:** Established strict security practices across both platforms, including network segmentation, secrets management, and secure API design.

PromoExchange

Feasterville-Treose, PA

Lead Software Engineer

November 2014 – February 2016

- **Rapid Delivery:** Architected and deployed a cloud-native platform in just four months, utilizing containerized services and automated pipelines.
- **Client Value:** Achieved significant cost reduction for clients through efficient resource utilization and platform optimization.
- **Tech Stack:** Node.js, JavaScript, Heroku, Cloud Infrastructure, Automated Deployments.

ASI

Enterprise Architect

Feasterville-Treose, PA

March 2012 – November 2014

- **Cloud Migration:** Migrated monolithic applications to cloud-native microservices, implementing autoscaling and disaster recovery.
- **Performance:** Improved system performance by **170%**, supporting 3M+ daily requests with 99.9% uptime across global deployments.
- **Tech Stack:** C#, Node.js, Microservices, Load Balancing, Monitoring/Alerting.

Thomson Reuters

Senior Technical Lead

Boston, MA

October 2009 – March 2012

- **High Availability:** Designed ultra-low latency infrastructure for mission-critical financial data systems.
- **Optimization:** Implemented custom monitoring and network optimization to achieve industry-leading performance.

Achievements & Recognition

- **Inventor:** Holder of US Patent **6,119,104** for a patented multi-channel banking solution.
- **Award:** Recognized with the **Smithsonian Innovation Award**; work archived in their permanent collection.
- **Advisory:** Served on Microsoft's investment banking advisory board (DNAfs).

Skills Summary

- **AI & Automation:** Agentic Workflows, LLM Integration, AI-Assisted Coding, Automated Refactoring.
 - **Cloud Infrastructure:** AWS/Azure/GCP, Terraform (IaC), VPC/VNet, DNS, Load Balancing, Disaster Recovery.
 - **Containers/DevOps:** Docker, Kubernetes, Balena Fleet Management, Microservices, CI/CD, GitOps.
 - **Monitoring/Security:** Prometheus, Grafana, ELK, IAM, Secrets Management, Incident Response.
 - **Languages:** Node.js, JavaScript, Python, Bash, C++, TypeScript.
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References available upon request.