Patrick J. McDonagh

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Executive Summary

Experienced engineer with 10+ years designing, scaling, and operating cloud-native and IoT platforms. Proven track record owning critical systems, leading cross-team technical initiatives, and improving reliability, security, and developer productivity. Deep expertise in Go, JavaScript/TypeScript, AWS, Kubernetes, and distributed systems, with strong product intuition.

Technical Leadership & Impact

- Owned and evolved platform-critical services supporting security-sensitive data at scale
- Led architectural migrations from serverless to Kubernetes across multi-team systems
- Set engineering standards for APIs, data models, and developer experience
- Worked across product, infrastructure, and security boundaries to deliver reliable systems
- Mentored engineers and served as escalation point for complex system issues

Systems Philosophy

- Design services to do as few things as possible, favoring clear boundaries over over-complication
- Treat product and engineering as a single problem-solving partnership with shared ownership of outcomes
- Build minimum lovable products (instead of minimum viable products) through rapid prototyping, frequent stakeholder feedback, and iterative refinement
- Great-functioning products with poor design are often experienced as bad products by non-technical users

Experience

PwC / Kunai — Senior Cloud Engineer

Jul 2024 – Present · Remote

- Embedded with Capital One's Velocity Black platform, owning data security and privacy pipelines
- Designed real-time detection and mitigation systems for highly sensitive human data under strict latency constraints using OCR
- Led performance and reliability testing strategy for distributed services
- Improved platform security posture via automated secret rotation and hardened workflows

Pepper — Core Services Team Lead / Senior Software Engineer

Apr 2022 – May 2024 · Remote

- Technical lead for core IoT ingestion and API platform used by customer-facing mobile applications
- Owned backend architecture in Go, Node.js, and Protocol Buffers
- Led migration from AWS Lambda to Kubernetes and Knative, improving scalability and cost efficiency
- Established internal developer platform standards via Backstage
- Acted as primary technical partner for product and mobile teams

HSB Meshify — Director of Product / Senior IoT Integrations Engineer

Aug 2018 – Apr 2022 · Remote

- Owned end-to-end IoT product strategy spanning hardware, firmware, cloud services, and analytics
- Designed and launched LTE-M and NB-IoT hardware products
- Led global infrastructure migration to Kubernetes
- Reduced platform downtime from approximately 24 hours per month to under 30 minutes per month
- Balanced technical architecture with customer and business constraints

Henry Pump — Product Manager / Software and Electrical Engineer

Nov 2014 – Aug 2018 · Remote

- Designed control systems and analytics platforms for industrial production environments
- Delivered full-stack systems across embedded, backend, and UI layers

Rockwell Automation — Field Service Engineer

Apr 2013 – Nov 2014 · Dallas, TX

- Delivered PLC, HMI, and VFD solutions for industrial automation and water filtration systems

- Executed legacy system migrations and on-site commissioning

Barry-Wehmiller Design Group — Electrical Engineer
Jun 2011 – Apr 2013 · St. Louis, MO

- Led manufacturing control projects, including virtualization of production servers for large-scale facilities

Skills and Domains

Languages: Go, JavaScript/TypeScript, Python, SQL
Cloud and Infrastructure: AWS, Kubernetes, Knative, Terraform, Serverless
Architecture: Distributed systems, event-driven platforms, IoT
Security: Data privacy, secrets management, secure data pipelines
Controls and Physical Systems: PLC and industrial automation systems; HMI and SCADA design and implementation; real-time and safety-critical system constraints; hardware–software integration, field reliability, and remote monitoring
Leadership: Technical strategy, cross-team collaboration, mentorship

Education

B.S. in Electrical Engineering
University of Missouri, Columbia · May 2011