AARON BURKE

SENIOR BACKEND SOFTWARE ENGINEER

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Strategic engineer who modernizes complex systems, drives reliability at scale, and leads cross-functional initiatives that turn infrastructure work into measurable business impact. Active Secret clearance.

PROFESSIONAL SUMMARY

Senior Software Engineer with 18 years of experience delivering production systems across distributed systems, cloud infrastructure, machine learning, and embedded platforms. Known for improving reliability, security, and delivery speed while leading cross-functional initiatives and mentoring engineers. Deep background in C#, C, Kubernetes, Microsoft Azure Platform, CI/CD, and runtime engineering, with Secret clearance.

TOP ACCOMPLISHMENTS

- Partnered directly with sales and government stakeholders to diagnose technical blockers and validate architectural feasibility, providing engineering guidance that materially contributed to securing an $18M contract.
- Automated data hotfix deployment, reducing merge-to-production time from 1–2 hours to under 5 minutes.
- Built scalable Kubernetes and Azure components supporting billions of requests per day.
- Modernized CI/CD, ported legacy Windows components to .NET, and mentored interns and early-career engineers.

AREAS OF EXPERTISE

- Distributed Systems
- Scalable Architecture
- System Design
- Cross-Functional Collaboration
- Technical Leadership
- Performance Optimization
- Code Quality & Reviews

TECHNICAL PROFICIENCIES

Languages: .NET, C#, C/C++, Go, Bash, PowerShell
Tooling: Azure DevOps, Git, CI/CD, Kubernetes, Docker, Helm
Platforms: Azure, AWS, On-Premises

PROFESSIONAL EXPERIENCE

Microsoft **May 2020 to Present**
Remote

- Provided critical engineering support to sales for high-impact government customer, resulting in an $18M sales contract.
- Led security, compliance, and infrastructure-hardening workstreams (JEDI, FedRAMP), aligning runtime, tooling, and operational processes with stringent government requirements.
- Owned end-to-end data hotfix infrastructure - from tooling to runtime integration - automating a previously manual 1-2 hour workflow into a reliable sub-10-minute path from merge to production readiness.
- Architected and implemented a synchronized cluster service enabling Kubernetes workloads to reliably retrieve production data from Azure Blob Storage, ensuring consistency across distributed nodes.
- Progressively took ownership of the “leaf” runtime component - core to hosting AI language-translation models - guiding its evolution within a microservice architecture.
- Operated and improved Kubernetes clusters serving billions of daily requests, driving reliability hardening and performing deep live-site diagnostics and root-cause analysis during on-call rotations.
- Obtained Secret clearance to perform secure diagnostics and administrative operations on US Government clusters, enabling faster resolution of restricted-access issues.

- Modernized CI/CD pipelines and tooling for a long-lived multi-team monorepo, reducing build overhead and eliminating unused projects and packages through automated analysis.
- Collaborated with research, data, and training teams across time zones to integrate evolving neural-network model requirements into the runtime, ensuring compatibility and smooth deployment.
- Led the transition of legacy Windows-only components to cross-platform .NET, enabling Linux-based Kubernetes deployment and reducing long-term maintenance burden.
- Mentored interns and early-career engineers and contributed to university and industry hiring loops to support team growth.

ScaleOut Software **May 2011 to May 2020**

Bellevue, WA

- Engineered core C++, .NET, and REST APIs powering major product features and integrations, establishing consistent patterns for reliability and maintainability.
- Built containerized delivery pipelines and published offerings to Docker Hub, AWS Marketplace, and Red Hat catalogs, serving as technical contact for partner integrations.
- Expanded Linux platform support (Debian, systemd) to improve deployment consistency and operational reliability.
- Added CloudFormation deployment of the AWS Marketplace offering to .NET and Python management tools, improving deployment automation and customer onboarding.
- Unified disparate Windows and Linux build systems under CMake, reducing build complexity and enabling a single cross-platform toolchain for the engineering team.
- Researched and designed cross-platform features in our core product (e.g., memory-mapped files, OpenSSL integration, custom memory allocator, OS- and compiler-specific atomics).
- Maintained and enhanced the automated functional testing framework, improving test coverage and accelerating detection of regressions across the product suite.
- Performed deep-dive diagnostics across distributed logs and telemetry sources to identify root causes of complex customer issues and drive long-term fixes.
- Collaborated with enterprise customers to diagnose production issues and translate findings into long-term product improvements.
- Served as company-wide infrastructure SME, overseeing identity, network, workstation, and operational systems to ensure stable internal environments.
- Mentored seasonal software interns.

Dynon Avionics **Jan 2008 to May 2011**

Woodinville, WA

- Developed embedded firmware and supporting software for avionics systems, including sensor integration, calibration workflows, and manufacturing diagnostics.
- Built internal tools and deployment processes that improved reliability and consistency across production workstations.

EDUCATION

University of Washington, Bothell, WA

BS - Computing and Software Systems