NICHOLAS FERGUSON

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PROFILE

I drop into unfamiliar environments and pick up whatever is needed to ship. I start by learning the problems of the people around me, which gives me an accelerated tour of the company. I work outward from there: customers, business model, competitive landscape. That's how I end up identifying new product categories or creating functions that didn't exist before. Four platforms built from scratch across three companies. I've led distributed engineering teams and I build systems that run without me.

SKILLS

Languages: Python, C#/.NET, TypeScript, Rust, C++, SQL, Bash, PowerShell
Infrastructure: AWS, Linux, Kubernetes, Docker, Terraform, Ansible, VMware
Data: PostgreSQL, SQL Server, MongoDB, ClickHouse, Kafka, Redis
Also: Distributed team leadership, cross-platform build systems (Windows/macOS/Linux/Android/iOS), CI/CD pipeline design, EV code signing, release engineering, LLM-augmented development workflows, technical writing, customer-facing delivery

PROFESSIONAL EXPERIENCE

A10 Networks *(acquired ThreatX)*
Senior Platform Engineer   Feb 2025 – Mar 2026

- **Delivered on a commitment to the German government and repositioned the product for A10's 7,700 existing customers.** The legacy SaaS architecture couldn't meet GDPR-compliant on-prem deployment. Rebuilt it as a standalone edge sensor with sub-millisecond detection (4,400× faster than the cloud model), then built a fleet management and collective defense command plane. Result: on-prem or air-gapped deployment, replacing a dozen networked services with a single binary.

- **Bridged the AI Firewall team's gap between prototype and production.** Their LLM researchers had built protections against AI agent abuse and data exfiltration but needed networking, release engineering, and cross-platform deployment expertise to ship. Wrote v1 endpoint agents for Windows, Linux, macOS, iOS, and Android (kernel-level drivers, EV code signing, notarization, MDM deployment), then integrated their detections into the edge sensor, consolidating everything at the edge.

- **Identified a product gap competitors missed.** Every WAF vendor detects authorization attacks, but none provide continuous visibility into which endpoints actually enforce auth. Built an authorization coverage map that auto-discovers from live traffic with zero configuration, plus a local LLM feedback loop for per-customer behavioral learning. Market gap identification to working MVP to product roadmap.

- **Gave sales the ability to close deals they were losing.** Live proof-of-concept deployments couldn't guarantee attacks on-demand, stalling evaluations. Built a demo platform where sales engineers tailor attack scenarios per vertical and spin up environments with one click, plus a self-service validation platform so customers verify compliance without tying up the SOC. Led a team of 4 offshore frontend engineers on the platform UIs, owning task assignment, code review, and delivery.

ThreatX *(acquired by A10 Networks, Feb 2025)*
Senior Platform Engineer   Jan 2022 – Feb 2025

- **Created the professional services function.** Recognized the company had no way to deliver custom integrations. Proposed the service model, organized delivery, and personally ran 4 enterprise engagements: Microsoft-ecosystem integrations, a VMware appliance for a customer who wouldn't run Linux containers, and pre-sales technical translation that opened new market segments.

- **Fixed customer onboarding, then built the team to run it without me.** Identified that scattered scripts and manual steps were frustrating both engineering and the SOC. Built a unified sensor management CLI with hot-reloading plugin architecture, then mentored SOC analysts into SRE practitioners who took over the platform entirely.

- **Diagnosed a production failure that two weeks of planned optimizations couldn't fix.** Built a distributed load testing framework from scratch, identified Linux conntrack table exhaustion at the kernel level at 150K RPS, built dynamic conntrack sizing. Saved a $1M contract.

- **Cut AWS spend ~50% (~$60K/mo).** Consolidated per-customer VPCs into shared infrastructure, redesigned scaling from CPU-based to connection-based after identifying the fleet was scaling on the wrong metric.

- **Stabilized production database under load and built the attack simulation platform featured at Black Hat.** Deployed Kafka (AWS MSK) as a buffer when the database was saturating under production traffic. Built ThreatX Labs, a serverless attack simulation platform (Lambda, Step Functions) used in the Black Hat keynote demo.

Vispero

Senior Platform / Build Engineer   Oct 2018 – Dec 2021

- **First platform developer in a newly created role.** Built the internal developer platform from scratch: a task-based build DSL abstracting compilation across 6 targets (Windows, macOS, iOS, Android, Linux, Embedded Linux), self-bootstrapping from a clean machine. Shipped $50M/year in software on this framework. Recognized with quarterly award (1 of 450+ employees).
- **Unified 4 acquired companies into one engineering organization.** Each acquisition brought different architectures, toolchains, and target platforms. This is what drove building the cross-platform framework. Contributed to 3 new product lines.
- **Gave developers back a full day per week by automating release engineering.** Replaced the release engineering team as a gatekeeper across 600+ pipelines. Gave developers sandbox environments with template guardrails, automated the release candidate process, and built diagnostic tools including a static analyzer with 100% accuracy on compiler error diagnosis.
- **Eliminated a 3-day turnaround and a single point of failure on $2M+ in government licenses.** Reverse-engineered license generation logic out of an ancient C++ application backed by XML flat files that only one person understood. Rebuilt as a database-driven platform, reducing license turnaround from days to immediate.
- **Isolated engineering from a ransomware attack.** Designed hybrid CI/CD architecture (AWS control plane, on-prem ephemeral VMware agents). Had already migrated all dev services to AWS before ransomware incapacitated the rest of the organization.

PROJECTS

Open source tools and platforms. Technical deep dives at nickcrew.github.io/resume

- **Inferno Lab:** Security testing, simulation, and education platform. Three integrated tools: Apparatus (58+ feature security simulation lab), Chimera (450+ endpoint training platform across 22 verticals), and Crucible (enterprise attack validation with MITRE ATT&CK mapping and compliance reporting).
- **Cortex:** AI development framework. Context orchestration for Claude Code, Codex, and Gemini. 90+ skills, intelligent recommendation engine that watches project directories and activates relevant agents, memory vault, and a Python CLI/TUI.
- **Facet:** Vector-based job search platform. Targeted resume generation with Typst WASM rendering, pipeline tracking, AI-powered interview prep and cover letters, and a feedback loop that learns what works. React 19, TypeScript, Zustand, TanStack Router.

EDUCATION

St. Petersburg College, Clearwater, FL. AAS, Computer Information Systems