

RYAN A. BOOTH

Canyon, TX • (806) 679-0903 • boothr2@gmail.com • www.linkedin.com/in/ryanbooth • www.abstractryan.ai

APPLIED AI ARCHITECT

**Applied AI & Agentic Systems Architecture | Platform Engineering | Cloud Infrastructure & Distributed Systems
Enterprise Automation & AI Integration | Technical Leadership & Engineering Management | Infrastructure Modernization**

Over two decades of experience in architecting enterprise infrastructure, modernizing cloud platforms, engineering distributed platforms, building intelligent automation solutions, and delivering production-ready agentic AI solutions to accelerate innovation, operational scalability, and business performance across complex technology environments. Highly skilled in bridging deep networking, cloud, and software engineering expertise with next-generation agentic AI, designing end-to-end AI-native applications, multi-agent systems, RAG architectures, Model Context Protocol (MCP), Agent-to-Agent (A2A) frameworks, orchestration patterns, and secure local model-serving environments to transform complex business challenges into usable, scalable AI applications. Specialized in combining architectural vision, hands-on engineering, analytical problem-solving, and technical leadership to build scalable platforms, accelerate enterprise AI adoption, optimize engineering workflows, mentor high-performing teams, and deliver resilient solutions that create measurable business value.

**Multi-Agent Systems | Retrieval-Augmented Generation (RAG) | Model Context Protocol (MCP)
Agent-to-Agent (A2A) Architecture | AI Workflow Orchestration | Cloud Platform Architecture (AWS)
Infrastructure as Code (Terraform, Ansible) | CI/CD & Platform Automation | Cross-Functional Technical Leadership**

SELECTED AI PROJECTS

- **Tokru.ai:** Launched a live agent-native professional presence platform through a machine-readable capability registry that converts existing work into an AI-drafted, published profile at `{handle}.tokru.ai`, with human and agent interaction supported through MCP.
- **Root Cause:** Proved agentic-development methodology through a Rust + Bevy datacenter simulation covering power, thermal, CLOS networking, cascading failures, a local multi-agent narrator, and 80+ integration tests.

PROFESSIONAL EXPERIENCE

Blue Ridge Systems, LLC Founder & AI Solutions Architect

2024 – Present

Lead independent AI architecture, prototyping, and applied systems development across agentic workflows, RAG patterns, orchestration models, integrations, MCP, A2A, A2P, local model serving, and AI-native product concepts. Focus on practical architecture work that turns emerging AI capabilities into testable prototypes, portfolio builds, and early-stage advisory solutions.

- **Created practical agentic architecture patterns** by developing end-to-end workflows across MCP, agent-to-agent (A2A), and agent-to-payment (A2P) protocols, with emphasis on secure agent coordination, tool use, workflow automation, and enterprise-ready interaction models.
- **Proved the methodology across difficult build scenarios** by guiding AI-assisted development of a full SaaS product and a complex simulation project in an unfamiliar language, with architecture, testing, iteration, and technical oversight carried from concept through working system.
- **Developed a personal agent operations environment** by defining Lisa, a multi-agent harness, and Millhouse, a self-hosted observability stack, to support development workflows, application visibility, system monitoring, and AI-operated execution.
- **Expanded secure deployment options** by running local model serving through Ollama and vLLM alongside hosted models, custom MCP servers, and agent tooling for controlled execution across prototype and portfolio environments.

Juniper / Apstra Engineering Manager

2021 – 2025

Directed CloudLabs through Juniper's acquisition of Apstra, overseeing a five-person technical team and a globally distributed lab/demo platform used across sales, support, product, and engineering. Allocated 20-40% of later-year capacity to internal applied-AI pathfinding with technical teams, focused on prototype evaluation and practical workflow exploration.

- **Drove 500% post-acquisition adoption and 10% year-over-year growth** by making CloudLabs the enablement environment used to ramp the full sales and support organization on Apstra within the first quarter after close.
- **Reduced lab provisioning from months to hours** by integrating CloudLabs with the Jenkins CI/CD pipeline, enabling five dedicated lab environments to stand up in two hours and fresh product builds to reach customer-facing teams within hours of release.
- **Preserved CloudLabs as the preferred lab and demo platform over better-resourced internal alternatives** by demonstrating stronger speed, usability, technical fit, and execution quality with a lean 4-5-person engineering team.

Apstra

2017 – 2021

Senior Automation Solutions Architect

Established the platform foundation across software, infrastructure, virtualization, user provisioning, and cross-functional technical adoption before Juniper's acquisition of Apstra.

- **Turned CloudLabs from internal Ansible scripts into a scalable customer-facing platform** by restructuring the architecture, expanding its use case beyond internal demos, and growing the team from one to five engineers.
- **Enabled on-demand multi-vendor lab access** by architecting Flask, Celery, Redis, React, TypeScript, and KVM virtualization across Cumulus, Arista, Cisco, and Juniper hardware in multi-region AWS bare-metal environments.
- **Elevated developer and customer automation adoption** by structuring and open-sourcing apstra-api-python, a client library that helped network engineers move from CLI-based workflows into REST API interaction.
- **Connected network infrastructure and software development teams** by translating automation requirements into platform capabilities that empowered customer automation strategies and product-led technical enablement.

PNC Bank

2015 – 2017

Senior Network Engineer

Facilitated core network infrastructure for a nationwide banking environment spanning five interconnected datacenters, a 100GbE MPLS backbone, Cisco ASR routers, Nexus datacenter pods, WAN, internet, and all U.S. banking operations.

- **Accelerated root-cause analysis for datacenter infrastructure teams** by configuring Ansible-based tooling for alerts, troubleshooting, configuration builds, change execution, and data collection across complex network environments.
- **Introduced early streaming telemetry exploration** by piloting Arista CloudVision capabilities at a time when real-time network analytics were still emerging in enterprise infrastructure.
- **Progressed a year-long MPLS DCI modernization effort through UAT** by evaluating IOS-XR migration paths toward Segment Routing and BGP-LS for more resilient, programmable failure routing.
- **Shaped the network automation roadmap** by assessing automation vendors and startups, driving the selection of Network to Code for the datacenter engineering organization.

EARLIER CAREER

Senior Network Engineer, BSA Health System: Restored stability to a hospital network after a 3-4-day system-wide outage by resolving spanning-tree loops and routing instability, relaunching Cisco Nexus 7K/5K/2K datacenter fabric, re-establishing a 6500 VSS campus core, standardizing templates, and integrating clinic acquisitions.

Security Specialist, B&W Pantex: Designed secure, redundant mission-critical infrastructure across Cisco Nexus, Palo Alto firewalls, hardening standards, RADIUS authentication, monitoring, and Motorola wireless mesh for a 16K-acre plant.

EDUCATION & CREDENTIALS

MBA, Technology / Information Systems Management, University of Phoenix

BS in Information Technology, Information Systems Security, ITT Technical Institute

AAS in Networking Technologies, Amarillo College

Certifications: CCIE Routing & Switching (Inactive) | CCNP (Expired) | CCDP (Expired) | CCIP (Retired)

THOUGHT LEADERSHIP & COMMUNITY

Tech Field Day: Community-selected delegate/presenter across AI Field Day 8/7, Networking Field Day 12/8, ONUG Spring 2016, Intel Cloud Day 2016, and Cisco Live US 2015; presented A2A/A2P at AI Infrastructure Field Day 8; additional vendor representative appearances.

Podcasts & Panels: Featured in *The CTO Advisor* panel episode, "Ready or Not, AI is Coming to the Enterprise," discussing practical enterprise AI adoption and infrastructure readiness. Additional appearances include Kentik Telemetry Now, Packet Pushers Episode 311, and Searching for Null0.

Publishing & Community: Contributor and presenter with AIMUG Austin on agentic systems, RAG, and LLM tooling. Publishes technical content through abstractryan.ai, paid Substack on AI and infrastructure, YouTube devlog @that1guy15, and GitHub @that1guy15.

TECHNICAL SKILLS

Applied AI & Agentic Systems: MCP, Custom MCP Servers, A2A/A2P, RAG, Agent Workflow Design, Local Model Serving, Ollama, vLLM, LangChain, LangGraph, Claude, Claude Code, OpenClaw | **Cloud, Software & Platform Engineering:** Python, FastAPI, Flask, Celery, Redis, Rust, Bevy, TypeScript, React, Astro, Cloudflare Workers, AWS, KVM, Docker, Terraform, Ansible, Jenkins CI/CD | **Network Infrastructure:** CCIE R&S, MPLS, Segment Routing, BGP/BGP-LS, Leaf-Spine Fabric, Streaming Telemetry, Multi-Vendor Architecture, Intent-Based Networking