

Ryan Townley

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Summary

Senior Full Stack AI Engineer with 6 years of experience shipping end-to-end products on TypeScript, React, Python, and AWS. Led development of Aperture, an AI-powered Real World Data platform projected to generate eight-figure ARR, building production RAG pipelines, agentic workflows, and multitenant cloud architecture in a regulated healthcare environment. Comfortable owning products from architecture through delivery and iterating on incomplete requirements at pace.

Skills

AI Engineering: Anthropic API (Claude), RAG, Embeddings & Vector Search, AI Agents & Agentic Workflows, AI Evaluation (Evals), Prompt Engineering, MCP, Hugging Face, Amazon Bedrock, Snowflake Cortex

Languages & Frameworks: TypeScript, JavaScript, Python, SQL, C#, Node.js, Express.js, React, Vue.js, Next.js, GraphQL, RabbitMQ, Jest, Playwright

Cloud & Infrastructure: AWS (EC2, Lambda, API Gateway, ECS, S3, Cognito, Amazon Verified Permissions, CloudFront, Route 53), GCP, Terraform, Docker, Kubernetes, GitHub Actions, PostgreSQL, Snowflake, MongoDB, DocumentDB

Architecture: Microservices, Distributed Systems, Event-Driven Architecture, Multitenant SaaS, CI/CD, DevSecOps

Experience

Proscia Apr 2025 - Jun 2026

Senior Software Engineer (Lead, Aperture)

Led development of Aperture, Proscia's AI-powered Real World Data platform connecting pharmaceutical and clinical research workflows.

- Delivered Aperture, an AI-powered Real World Data platform projected to generate eight-figure ARR, surfacing clinical-trial candidates in real time from ~32,000 daily patient records. This included architecting three event-driven TypeScript microservices using RabbitMQ, Snowflake, PostgreSQL, AWS S3, and Claude Sonnet 4.5
- Built production retrieval-augmented generation (RAG) pipelines with grounded, source-cited responses for patient discovery, developed domain-specific AI skills and agentic workflows encoding clinical business logic, and evaluated retrieval and output quality to control hallucination in a regulated environment
- Designed the organization's first multitenant authentication platform using AWS Cognito, Amazon Verified Permissions, Terraform, FluxCD, and Kubernetes, enabling incremental migration via just-in-time account provisioning; shipped CI/CD pipelines for three projects, delivering the final one in three days
- Owned full-stack product delivery — Vue.js dashboard for cohort building, licensing, billing, and patient-status tracking on Proscia's design system — while serving as product owner: gathered feedback from ~30 pilot users, kept releases on schedule, and supported marketing campaigns that grew platform awareness
- Deployed a privately hosted Hugging Face LLM for secure internal inference over sensitive data, and contributed to company-wide AI research evaluating emerging LLM technologies
- Built internal AI engineering workflows with Claude Code and custom MCP tooling to automate development tasks and accelerate debugging while maintaining human review

HyperTunnel Mar 2024 - Mar 2025

Senior Software Engineer/Cloud Architect

HyperTunnel enables real-time collaboration for frontline workers using digital twins and advanced tools. Work completed for this project met all Air National Guard SOW requirements, and had a direct impact on HyperTunnel securing a third round of funding from this client.

- Migrated the platform from a single monolithic EC2 instance to a distributed AWS architecture (ECS, Lambda, API Gateway, ELB, CloudFront, Cognito, DocumentDB), significantly improving performance, scalability, and security
- Engineered a low-latency Node.js/TypeScript API powering multi-dimensional collaboration between Unity clients and cloud infrastructure
- Led a React + TypeScript admin portal replacing legacy Windows software, integrated with S3, Route 53, Cognito, and CloudFront; standardized GitHub Actions CI/CD across the team, eliminating manual deployments
- Led adoption of GitHub Copilot across the engineering team, introducing AI-assisted development workflows that accelerated implementation, improved knowledge sharing, and reduced repetitive engineering work.

Trinnex Sep 2022 - Jan 2024

Full Stack Engineer

Trinnex's leadCAST provides digital solutions for monitoring hazardous waste in water systems.

- Designed a full-stack client onboarding application that cut onboarding time from days to minutes — a 99% reduction (React, TypeScript, Next.js, C#, GraphQL, PostgreSQL, Kubernetes, GCP)
- Built a bulk uploader processing hundreds of thousands of waterline inspections in seconds, replacing a fully manual workflow
- Developed a C# microservice integrating Keycloak for authentication and access management

Cisco Mar 2022 - Aug 2022*Full Stack Engineer*

- Developed an intellectual-capital auditing tool (Node.js, TypeScript, Angular, AWS, MongoDB) streamlining report submission for 130,000 assets across all Cisco departments.
- Integrated Big Data Broker APIs and assisted the migration from physical servers to AWS

The Five Network Jun 2021 - Mar 2022*Full Stack Engineer*

- Integrated Zoom for in-app meetings and scheduling
- Automated bulk account-manager assignment and mentor-mentee pairing.
- Migrated a legacy Java Spring backend to Node.js/Express, refactoring ~50 APIs with measurable response-time improvements

Education

Rowan University Sep 2016 - Dec 2020*Bachelor of Science - Computer Science*

GPA: 3.7

Honors: Cum Laude

Clubs: Upsilon Pi Epsilon