ADRON HALL

Principal Engineer & Technical Product Lead | Gen AI & Agentic Delivery | API, Data & Cloud Platforms

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PROFESSIONAL SUMMARY

Principal-level engineer and technical product lead with 25+ years across cloud, API, data, and Gen AI platforms. Today, as a self-employed principal software engineer, I lead cross-functional teams building agentic processes and controls for Gen AI tools (Claude, Cursor, Copilot, Codex) and set up best practices for AI/LLM software factories and the SDLC. Before that I led order-fulfillment engineering at Starbucks, ran a Data Fabric modernization at PNC Bank that cut backend operating cost by millions annually, built product practice at Hasura and AWS, and architected an Apache Cassandra DBaaS at DataStax. I pair product and governance discipline with hands-on execution, backed by SRE and principal engineering work at Home Depot, DataStax, and AWS.

CORE COMPETENCIES

- **Technical product ownership:** Intake, triage, prioritization, and escalation; owning backlogs from features and epics down to acceptance criteria, and building that practice where none exists.
- **Gen AI & agentic delivery:** Agentic processes and controls for Claude, Cursor, Copilot, and Codex across teams and organizations; AI/LLM software factory and SDLC best practices for speed, accuracy, and output quality.
- **API & data platform modernization:** API-first Data Fabric design, REST and GraphQL APIs, event-driven and streaming systems, and legacy-to-modern migrations with a measured ROI case.
- **Platform engineering & SRE:** Cloud operations on AWS, Azure, and GCP; Kubernetes, Terraform, CI/CD, immutable infrastructure, and observability.
- **Team building & leadership:** Hiring and building teams, founding Communities of Practice, mentoring, and aligning teams to measurable outcomes.
- **Stakeholder facilitation:** Discovery workshops with business owners, executive readouts, and turning competing asks into a sequenced plan.

EXPERIENCE

CTC — Principal Software Engineer **Mar 2026 – Present**
Seattle, WA — Remote

- Leading cross-functional teams in developing agentic processes and controls for Generative AI systems (Claude, Cursor, Copilot, Codex, etc.) used across team and organizational structures.
- Setting up best practices for AI/LLM Software Factories and the SDLC, streamlining effort to improve speed, accuracy, and efficiency, and managing the quality of process output.
- Scoped and managed projects to align with core business needs and product focus, from individual features to full strategic capabilities and entire products, ensuring effective resource allocation in this new Gen AI world.
- Collaborated closely with stakeholders to drive innovation and maintain focus on business objectives.

Tooling: .NET, Java + Spring Boot, iOS, Web (React/JavaScript, Node.js, and related server tech), Python (generally for AI and pipelines), Go (pipelines, infrastructure, distributed systems), a minor bit of Rust, and a wide range of databases: PostgreSQL, SQL Server, MySQL, Apache Cassandra, DynamoDB, Supabase (PostgreSQL w/ APIs), and others.

Starbucks — Principal Engineering Lead / Technical Product Lead, Order Fulfillment **2024 – Mar 2026**
Seattle, WA

- Joined to build out and lead the engineering team tasked with delivering QR Code scanning technology to close the order cycle gap, leading product and technical direction for two order-fulfillment initiatives in a high-volume retail environment.
- Defined and delivered a QR-based drink tracking capability that replaced estimated wait times with real-time fulfillment state, implementing Scandit scanning technology into existing .NET-backed Angular and .NET-backed React web applications. Contributed to a 20–35% reduction in customer wait time and a 5–8% throughput improvement.

- Worked directly with store operations and business owners to convert operational pain into prioritized, sequenced product requirements, with acceptance and success criteria tied to operational KPIs (order accuracy, fulfillment latency, throughput per store) used to validate releases before rollout.
- Established a reusable computer vision platform supporting POS timing, queue detection, and drive-thru analytics, sequenced as a platform investment later features build on rather than a single-use feature.
- Managed dependencies and rollout sequencing across store systems, mobile, and backend teams, aligning engineering execution to a phased store rollout strategy and its KPI gates.

Tooling: .NET, Angular, React, Scandit, computer vision, and many others.

Composite Thrashing Code (CTC) — Principal Engineer (Architect, Consultant, Trainer) Feb 2023 – 2024

Redmond, WA — Remote

Clients include PNC Bank, Tata Communications, Kaleyra, Vaco, and Incedo, among others.

PNC Bank: Data Fabric & API Modernization

- Led a large-scale platform modernization program moving fragmented enterprise systems onto a unified, API-first Data Fabric (More details), owning the roadmap, the buy-vs-build evaluation, and the measured ROI case.
- Reduced backend operating cost by millions annually through system consolidation and architectural standardization, the funding argument that kept modernization prioritized.
- Designed integration patterns for a multi-million-dollar white-label credit card platform, sequencing onboarding milestones against partner commitments and long-term scalability needs.
- Implemented vertical application stacks for reference and prototyping, with horizontal infrastructure as code for scaling, resiliency, deployment, management, and iterative development of containerized (Docker/K8s) Java Spring Boot APIs with continuous deployment. (More details)
- Established logging, tracing, and observability patterns for Spring Boot services. (More details)
- Defined development patterns for building and maintaining long-lived financial applications. (More details)
- Hired and built teams for multiple API modernization projects (moving from legacy tech to RESTful & GraphQL APIs, custom resolvers, etc.), leading scoping, statements of work, desired user experience outcomes, initial product planning, and aligning teams with the right hard and soft skills to the mission.
- Planned, organized, and mentored across a wide array of data sources including Oracle, SQL Server, PostgreSQL, MySQL, MongoDB, and Apache Cassandra.

Telecommunications: SMS Spam Mitigation

- Spam-mitigation API service, written in Java Spring Boot, providing out of band processing to filter SMS messages for spam, validate UDF/Data Types, and encode & decode message formats. Deployed on AWS with Terraform and GitHub Actions, with services for testing, environment management, and monitoring/observability. (More details)

Engineering Practice & Team Productivity

- Founded GraphQL and Java Spring Boot Communities of Practice (More details), growing from roughly a dozen to 80+ members in four months and keeping standards consistent across dependent teams.
- Created internal corporate training on deployment solutions & plans using Terraform for Infrastructure as Code (IaC) based on immutable infrastructure concepts.

Tooling: Java, Spring Boot, GraphQL, MongoDB, PostgreSQL, SQL Server, Oracle, MySQL, Apache Cassandra, Kafka, Flink, Docker, K8s, AWS, Terraform, GitHub Actions, and many others.

Hasura — Principal Product Manager Apr 2022 – Feb 2023

Seattle, WA — Remote

- Rejoined Hasura as a founding member of a new product management team, moving the team from little process to a process-focused product practice: intake, discovery, prioritization, refinement cadence, and an agreed definition of done.
- Led discussions on customers, use cases, and design decisions, clearing the path for engineering on new features and capabilities.
- Synchronized Productboard and Jira across product and engineering so one agreed workflow carried work from inception and ideation through development to done, improving communication, consistency, and delivery quality.

- Shipped Instant GraphQL on Amazon Athena and Instant GraphQL on Snowflake, from customer discovery and use-case definition through design, engineering delivery, and launch. See the data source connections.

Tooling: Haskell, Java, C#, Python, JavaScript, PostgreSQL, Amazon Athena, Snowflake, and numerous other technologies for integration and architectural guidance.

Amazon Web Services — Senior Technical Project Manager **Nov 2021 – Apr 2022**
Seattle, WA — Remote

- 60%: Writing, researching, and producing data analysis around AppSync, Amplify, and related developer use, including production-level CI/CD examples, schema modeling, and website architecture and deployment.
- 40%: Documentation, articles, and guidance on developer use of Amplify, AppSync, GraphQL, data infrastructure, DynamoDB, and related AWS services, including “How to connect your GraphQL API to AWS data sources”.

Tooling: GraphQL, JavaScript, Python, AWS AppSync, Amplify, DynamoDB, and other AWS serverless offerings.

Hasura — Principal Developer Advocate **Sep 2020 – Oct 2021**
Seattle, WA — Remote

- 30%: Reference, prototyping, and development of applications around GraphQL APIs using Hasura, in JavaScript, Go, Python, and other language stacks.
- 30%: Presentations, reports, analysis, and training on GraphQL and the architectural design of systems using GraphQL.
- 20%: DevOps guidance, patterns, and practices around deployment, maintenance, and architecture of Hasura and GraphQL API data services.
- 20%: Leading communication between customers, community, and internal product and engineering. Organized and produced the Hasura streaming shows (Hasura Coding and Hasura Data & APIs) and the “A Hasura Bit” video shorts, from content through audio, video, and animation. Blog posts @ Hasura.

Tooling: GraphQL, PostgreSQL, Hasura, Terraform, JavaScript, Go, Python, C#, AWS, GCP, Azure, and many others.

DataStax — Principal Cloud Architect / Principal Developer Advocate **Jun 2018 – Aug 2020**
Seattle, WA — Remote

Principal Cloud Architect, Dec 2019 – Aug 2020

- 90%: Architectural plans (design), guidance (team leadership & coordination), and implementation (coding) of DataStax’s Apache Cassandra DBaaS, AstraDB (More details), focused on the GraphQL API implementation, reference application guidance, technical content, and prospective customer and user outreach.
- 10%: Architectural design and implementation with K8s, Docker, Go, and other tooling for DBaaS deployment and related customer tooling for DBaaS and on-site Apache Cassandra/DataStax Enterprise.

Principal Developer Advocate, Jun 2018 – Dec 2019

- Built out and presented reference application designs and guides for large-scale, often microservice-based, enterprise applications using the KillrVideo code base in Java, C#, Node.js, and Python.
- Started, led, and organized Seattle-area meetups on database and data-centric development: data modeling, architecture, design, and coding.
- Regular technical content and blogging around open source projects and contributions (compositecode.blog).
- Started live-stream coding on Twitch and YouTube, covering Go, C#, JavaScript/Node.js, Apache Cassandra, DataStax Enterprise, distributed systems, Terraform, and DevOps.
- Articles, Multi-cloud Challenges with Patrick McFadin, and a guest appearance on The Open Source Show.

Tooling: GraphQL and RESTful APIs, Java, Python, Go, JavaScript, Terraform, K8s, Apache Cassandra, AWS, GCP, Azure, and many others.

Composite Thrashing Code — Principal Software Engineer (Consultancy/Contract) **Nov 2016 – Nov 2017**
Seattle, WA — Remote

Projects @ Pelo.Tech

- Led the rebuild of the company site and brought together community building around development efforts, language stacks, and related outreach.
- Mentored developers ramping up on projects across multiple e-commerce and IoT device companies.

- Led BDR efforts to expand outreach in the Seattle area for development services and the product offerings behind them.

Startup Engagements

- Helped startups make their first technical hires, build teams, and grow from there.
- Pushed businesses forward with lean startup approaches focused on quality, user experience, and assembling teams (coders, graphic design, user experience, and other roles) that get products built and deployed.
- Provided hands-on initial coding and prototyping for startups moving toward MVP and v1. Technology neutral, though often Go, Node.js, and JavaScript (React) for multi-tier web development.

Home Depot — Principal Software Engineer, SRE & Open Source Ethnographer — 2015 – 2016

Orchards, WA — Hybrid

- Researched the cultural changes and characteristics needed to build an effective organization around open source development, determining what would and wouldn't work for the team, and implemented the move from closed source to open source development practice.
- Presented this work at the O'Reilly Software Architecture Conference in London (slides and information).
- Migrated from an OpenStack platform to Google Cloud Platform, re-architecting from vertical to horizontal scaling with Terraform, Packer, Go, and Node.js.
- More detail: Elastic Meetup and Quote Center updates and taking the job.

Tooling: Terraform, Packer, Go, Node.js/JavaScript, Google Cloud Platform, OpenStack, distributed systems.

Contract Work — Principal Developer — Mar 2012 – Aug 2015

Portland, OR — Remote

CDK (May 2015 – Aug 2015)

- Led two teams, one of interns and one of mid-level and senior developers, on two efforts: navigating CDK's internal infrastructure to build and deploy a push notification server, and leading the *challenge* series to determine use cases, product fit, and deployment options for applications CDK teams could use internally.

Code Fellows (Feb 2015 – Apr 2015)

- Helped start the Portland branch of Code Fellows as the initial instructor, opening the office and teaching the first multi-week sessions on the core web development skills for a junior developer role: HTML, CSS, JavaScript, frameworks, libraries, Git, IDEs, and related tooling.

New Relic (Mar 2012 – Nov 2014)

- Wrote individual articles and series for the New Relic blog on Platform as a Service (PaaS), Node.js applications and deployments, and more, along with related pieces in Mashable, Silicon Angle, ReadWriteWeb, and others (my work elsewhere). This work ran alongside Deconstructed, Tier 3, and Basho.
- Worked on APM integration and data collection with Tier 3 for PaaS environments like Cloud Foundry, and with Basho for the Riak distributed database.

Basho (Dec 2012 – Aug 2013)

- Partnership scouting, sales call support, and partnership integration with New Relic and others. Handled community organizing, conference organization, and outreach in the Pacific Northwest, forming and running the Seattle and Portland Basho & Riak User Groups, and spoke and trained at conferences and user groups across the U.S.
- Built vertical and horizontal integration projects with Riak in JavaScript (Node.js), Ruby (Rails, Sinatra), .NET, and other languages, and helped customers architect networking, security, and implementations of Riak, Redis, Neo4j, and Postgres for highly available, scalable, resilient distributed data systems.

Tier 3 (Mar 2012 – Nov 2012)

- Led the Web Fabric PaaS team, expanded the Iron Foundry community, and pushed forward the Thor project. After the Web Fabric release in May, focused on advocacy, Iron Foundry open source community leadership, and initiating, building, and leading the team coding Thor as a UI for Cloud Foundry PaaS environments.
- Iron Foundry organization coder & community lead (Nov 2012 – Feb 2013): worked with the open source community and Tier 3 to enable Cloud Foundry for .NET. Spoke regularly at user groups and keynotes in Seattle, Portland, San Francisco, and beyond.

Deconstructed — Co-founder & CTO **Nov 2013 – Feb 2015**
Portland, OR

- Led the team that built a regionally distributed, load-balanced, multi-instance, auto-scaling engine that combined profile data from multiple devices into core individual profiles for query, with a business rules engine that acted on those profiles for sales, marketing, and related processing.
- 70%: Core technology on AWS (Elastic Beanstalk, CloudFormation, EC2, S3, RDS, Route 53, IAM, and SQS), with the engine and its processor services built in Node.js, designed so components could move to other stacks if needed (none ever had to).
- 20%: Contracts, agreements, and work within the open source community to determine technology needs and who could best meet them, within budget.
- 10%: Speaking with and for the community about the product and technology, and working toward the next stage of company development.

Russell Investments — Senior Application Developer **Nov 2010 – Jan 2012**
Seattle, WA

- Built enterprise systems and architecture that bridged data from many inbound sources into cohesive information and reporting displays for traders, accountants, and others.
- Trained and mentored on Git, Visual Studio, unit testing, TDD, and more; consulted on enterprise high availability and future architecture.
- Coded in TDD/BDD pair-programming teams with high velocity, high quality, and proactive burn-down charting that gave management insight to remove barriers. Production was .NET and Windows Server, with regular work in Node.js, JavaScript, Ruby, Rails, Sinatra, and more.

Logic20/20 — Senior Consultant / Programmer Lead **May 2010 – Nov 2010**
Seattle, WA

- Technical lead for three Windows Azure white papers on cloud computing, providing analysis, implementation, and deployment of Windows Azure Storage and roles for training and enterprise demo projects.
- Technical architecture for internal ASP.NET MVC customer support portal prototypes, using map-reduce queries against 100+ GB data systems and JavaScript/jQuery with asynchronous calls (what we'd now call single page applications).

Webtrends — Business Intelligence & Senior Software Engineer **Oct 2007 – Apr 2010**
Portland, OR

- 65%: Integration between the Webtrends application and SSAS using SSIS and proprietary tools, on data warehouses from hundreds of MBs to several TBs.
- 25%: Built applications with SSIS, SSAS, and .NET (web and Windows Forms) for integrations and data troubleshooting.
- 10%: Coordinated project work and planning, including deployment planning and implementation.
- Moved to the Webtrends Consulting Solutions & Services team to deliver integrations across Adobe AIR, Flash, .NET, Silverlight, WPF, and Office (a lot of Excel) with the Webtrends Data Exchange and Collection Services, plus enterprise governance and custom intelligence dashboards and scorecards for customers.
- Worked with clients before, during, and after the sales process, coordinated across sales, marketing, and engineering, and led key partner integrations from development and relationships through cost/benefit analysis.

Contract Work — Software Developer & Architect **Jan 2001 – Sep 2008**
Portland, OR · Covington, LA · Jacksonville, FL · Tacoma, WA · Memphis, TN

- **Labor Ready:** Individual contributor (C#, Java, prototyping), later team lead for multiple teams.
- **Instant Media:** ASP.NET (C#) web app and components for large video uploads, with the supporting infrastructure.
- **Corillian:** C# and XML platform projects for credit union and bank clients, including client travel.
- **Micro-Power Electronics:** Designed a Quote Management System in ASP.NET and SQL Server integrated with Goldmine CRM and Fourth Shift manufacturing, using OLAP and OLTP.
- **Citi HR Solutions:** Custom server controls for SQL Server data-driven applications; OOP/OOD with C# and Microsoft Application Blocks; trained and mentored junior developers.

- **Fidelity:** Internal request management web app integrated with Fidelity's Security Authenticator, including database and application architecture, UML work cases, and OOP.
- **Allstate:** OLAP warehouse feeds and data pipelines using DTS for ETL into primary cubes.
- **Bank of America:** Lead developer on data entry process enhancements; led a Six Sigma team.
- **SCP Distributors / Superior Pool Products:** "Purchasing Console" web application on SQL Server 2000 and ASP.NET/IIS 5.0.
- **Caesars Entertainment:** Developed and streamlined the change management reporting flow and system.
- **Cmedia:** Senior systems & database administrator and lead developer on multiple projects.

Lockheed Martin (with NASA, Naval Research Lab, Naval Oceanographic Office) — PC Tech & Database Administrator **Oct 1999 – Aug 2001**
Stennis Space Center, MS

- Technical support under two contracts for data collection and storage of sensor data from vertical and horizontal rocket tests, including positional data and its storage and reporting.
- Y2K mitigation and management of systems hardware and networking: discovery, patching, analysis, and replacement where necessary.

TECHNICAL DEPTH

Architecture & integration: REST and GraphQL API design, contract-first integration, event-driven and streaming systems (Kafka, Flink), microservices, distributed systems, legacy-to-modern migration patterns.

Cloud & platform: AWS, Azure, GCP, Kubernetes, Docker, Terraform, CloudFormation, CI/CD and GitHub Actions, observability and SRE practice; Jira, Productboard, and GitHub Projects for product and delivery tracking.

Languages & data: Go, Java, Python, JavaScript/TypeScript, C#, SQL; PostgreSQL, SQL Server, Oracle, MySQL, MongoDB, Apache Cassandra, Snowflake, Amazon Athena.

Gen AI & agentic: Claude, Cursor, Copilot, and Codex; AI/LLM software factories, LLM-assisted SDLC, agentic processes and controls, agent orchestration, evaluation and quality gates.

EDUCATION & CERTIFICATIONS

- **Six Sigma Green Belt / DFSS** (2004): Grade A, top 1% of class. Team lead within the training group during multiple weeks of Green Belt training in Charlotte, NC.
- **A.S. Computer Science,** Pearl River Community College (1996–1999): 3.7 GPA, named to "Who's Who" in final year.
- **Computer Science & InfoSec, audited,** Louisiana State University (1996–1998): Audited computer science classes for two years at the invitation of students and faculty, helping strengthen the InfoSec material in the coursework. Regularly attended 2600 meetups and worked with infosec groups on penetration testing and physical and network security for DOD, SPR, and infrastructure assets.