

Chris Rivera

Engineering Manager, R&D | AI-Native Products, Agent Infrastructure, Platform Modernization

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SUMMARY

Engineering leader and hands-on AI product builder with 15+ years delivering enterprise SaaS platforms, automation systems, APIs, and modern frontends. Strong fit for R&D teams that scout emerging AI capabilities, move from 0-to-1 prototypes to production systems, and sustain products through scale. Currently Director of Engineering at PS Technology, leading multi-product modernization, customer-facing delivery, and AI platform strategy in regulated rail software. Founder and builder of PostMine, an AI-native social knowledge platform using Claude, Whisper, xAI, FastAPI, React, GCP, PostgreSQL/pgvector, Pub/Sub, and semantic retrieval.

RELEVANT STRENGTHS FOR COMMURE R&D

AI / Agents	Claude, LLM orchestration, prompt and context design, tool calling, RAG, vector search, embeddings, pgvector, Whisper, xAI, local models, evaluation thinking
Backend / Platforms	Python, FastAPI, Java, Spring Boot, REST APIs, microservices, PostgreSQL, Oracle, SQL Server, event-driven and async architectures, Pub/Sub
Frontend / Product UX	React, Next.js, TypeScript, JavaScript, Material UI, Angular modernization, responsive enterprise workflows, iOS integration via Capacitor
Leadership / Execution	Engineering management, resource prioritization, mentoring, performance management, roadmap ownership, customer delivery, P&L-aware product execution

EXPERIENCE

Director of Engineering | PS Technology, a Valstone Portfolio Company | San Jose, CA / Remote | July 2023 - Present

Lead engineering execution, modernization strategy, AI platform direction, customer delivery, and divisional operating discipline across rail, transit, workforce, compliance, and operational systems used by Class I, commuter, and short-line railroads.

- Lead multiple engineering and delivery teams across CrewPro, CrewWatch, CAMS, QualPro, and CrewPro Shortline, coordinating onshore/offshore contributors, product leaders, QA, customer stakeholders, and executive sponsors.
- Defined AI architecture direction for regulated enterprise workflows, including a governed intelligence layer for model access, prompt/context construction, retrieval, tool execution, safety, evaluation, observability, and auditability.
- Architected concepts for conversational AI and agentic workflows over crew scheduling and operational systems, including typed function-calling contracts, policy/rules-engine checks, confirmation flows, human escalation, and deterministic handling of compliance-sensitive actions.
- Owning modernization of legacy enterprise platforms, including Java/Spring, AngularJS, React/MUI, Oracle-to-PostgreSQL planning, API modernization, cloud migration strategy, and pragmatic strangler-pattern refactoring.
- Built and directed AI-enabled productivity workflows using Claude Code CLI, custom skills, slash commands, agentic automation, workflow capture, transcript analysis, and document synthesis to improve team throughput and decision quality.
- Established delivery governance across multi-year, multi-million-dollar customer programs, improving milestone visibility, risk management, release quality, customer communication, and executive-level accountability.
- Eliminated a significant implementation backlog within two years, enabled scalable onboarding of new rail customers, and contributed to a 2x increase in recurring subscription revenue through delivery predictability and platform modernization.
- Serve as technical and executive escalation owner for incidents, RCA, corrective actions, post-implementation reviews, and customer trust restoration in high-stakes operational environments.
- Mentor engineers and emerging leaders while preserving a builder-oriented culture: hands-on architecture reviews, technical decision-making, direct analysis, prototyping, and product-quality ownership when delivery requires it.
- Own resource prioritization, staffing tradeoffs, cost modeling, commercial input, SOW structure, and product investment decisions across competing customer, roadmap, and support demands.

Founder / Principal Engineer | PostMine.io | San Jose, CA | 2025 - Present

Solo-built AI-native product that captures social posts, transcribes media, creates embeddings, and enables natural-language voice/text search across a personal knowledge base.

- Designed and built a multi-model AI architecture using Claude for orchestration, Whisper and xAI STT for transcription, embedding models with PostgreSQL/pgvector for retrieval, and local/cloud model routing for cost-aware automation.
- Implemented async ingestion pipeline: iOS share extension and Capacitor client enqueue jobs, backend fetches media and metadata, extracts audio, runs transcription, chunks transcripts, generates embeddings, stores vectors, and marks posts ready for search.
- Built backend services in Python/FastAPI on GCP with Cloud SQL PostgreSQL + pgvector, Firebase Storage, Pub/Sub workers, HMAC auth, request validation, and cost/reliability controls.
- Built React/MUI web experience and Capacitor iOS shell, focusing on responsive library workflows, share-extension ingestion, media performance, and low-friction AI search UX.
- Developed semantic search pipeline with voice query transcription, intent/query planning, vector similarity search, gap detection, reranking patterns, and result explanations to avoid confidently wrong retrieval outcomes.
- Created generative workflows for summarization, short-form scripts, voiceover preparation, and personal automation using Claude, xAI, ElevenLabs, OpenClaw, Ollama, and local Qwen models.

Director of Product & Engineering | Integrated Auction Solutions (IAS) | Austin, TX | 2016 - 2022

Executive product and engineering leader for a nationwide SaaS platform serving automotive marketplaces, auctions, and enterprise integrations.

- Led five cross-functional teams across product management, engineering, QA, and operations, managing approximately 35 staff and multiple scrum teams through a five-year SaaS modernization program.

- Transformed a legacy fat-client auction platform into a cloud-based SaaS ecosystem with modernized workflows, integrations, BI/analytics, and improved operational scalability.
- Led company-wide AWS migration, improving uptime, scalability, disaster recovery posture, deployment repeatability, and SLA performance for customer-facing systems.
- Expanded platform value through third-party integrations with accounting, payroll, marketplace, and auction ecosystem partners including ADESA, OVE, AuctionACCESS, Carvana, CarMax, Cars.com, and regional auctions.
- Partnered directly with customers and commercial stakeholders on demos, roadmap presentations, executive escalations, prioritization, and delivery commitments.
- Implemented Agile delivery practices, backlog discipline, release governance, and QA improvements to increase predictability and reduce delivery risk.

Senior Software Engineer / Product Manager | Whann Technology Group | Boulder, CO | 2012 - 2016

- Designed and delivered enterprise APIs enabling mobile and third-party integrations across distributed customer systems.
- Led database and platform modernization initiatives, including migration from FoxPro to MySQL and modernization of operational workflows.
- Managed distributed engineering contributors and coordinated cross-region releases while remaining hands-on in technical analysis and product execution.

EDUCATION & CERTIFICATIONS

Master of Science in Information Technology, Purdue Global | **Bachelor of Science in Cloud Computing and Solutions**, Purdue Global
Project Management Professional (PMP) | GCP Associate Cloud Engineer | Certified Scrum Master

SELECTED TECHNICAL KEYWORDS

AI agents, LLM orchestration, RAG, vector databases, pgvector, embeddings, speech-to-text, transcription, tool calling, agent evaluation, Python, FastAPI, PostgreSQL, Kubernetes-aware platform design, React, Next.js, TypeScript, JavaScript, Material UI, Angular, Java, Spring Boot, REST APIs, microservices, GCP, AWS, Firebase, Pub/Sub, healthcare-adjacent regulated software discipline, information security, auditability, PII-aware architecture.