Dinesh Kumar G

Staff Software Engineer | AI Lead Engineer

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PROFESSIONAL SUMMARY

Staff Software and Agentic AI Lead Engineer with over **8 years of experience** driving end-to-end product delivery across the full stack, cloud infrastructure, and **production-grade agentic AI**. Proven technical leader specialized in architecting **0→1 platforms**, from initial concept to enterprise rollout, including large-scale cloud modernizations and engineering platforms **accelerating team velocity**. Expert at bridging deep technical execution with **executive stakeholder alignment**, strategic roadmap influence, and mentoring engineering teams.

WORK EXPERIENCE

Staff Software Engineer | AI Lead Engineer | Diligent | 09/2021 - Present

Agentic AI Product - Third Party Risk Intel (TPRI)

- Led the end-to-end architecture and delivery of TPRI, Diligent's AI-native third-party risk intelligence platform, from initial concept through beta, general availability, and enterprise production rollout. Grew the product from **$0 to $170K+ in ARR within 3 quarters with a multimillion-dollar enterprise sales pipeline in place**.
- Defined the end-to-end architecture for a globally distributed, AI-native SaaS platform using **Domain-Driven Design (DDD)** and **event-driven microservices**, deployed across **9 AWS regions** through a single CI/CD pipeline, enabling consistent global deployments and simplified operations.
- Built Diligent's first production-scale **Agentic AI platform with RAG** in India using **Amazon Bedrock, Strands Agents, Bedrock AgentCore, Bedrock Knowledge Bases,** Lambda, Fargate, Postgres, Prisma, DocumentDB, and AWS CDK, designing **multi-agent retrieval and reasoning workflows** for AI-powered third-party risk intelligence and adverse media screening.
- **Reduced AI costs by ~93%** (**$8 to $0.55 per screening**), making the product commercially viable and enabling its continued launch and customer adoption. Achieved this by redesigning agent workflows, optimizing prompt engineering, and replacing expensive AI inference with deterministic search where appropriate.
- Built a highly scalable event-driven onboarding platform using Amazon EventBridge, SQS, and Lambda that automatically provisioned **25K+ enterprise organizations** and over **1M+ users in under 3 hours** with zero manual intervention, providing a resilient, horizontally scalable customer onboarding pipeline.
- **Developed a remote MCP server**, facilitating integration with **Salesforce Agentforce** to embed autonomous third-party risk intelligence and agentic screening capabilities directly into enterprise CRM workflows.
- Designed and implemented the platform's complete **Infrastructure-as-Code using AWS CDK**, enabling the engineering team to own the entire application lifecycle, from cloud infrastructure provisioning and networking to application deployment, monitoring, and operations, without dependency on a dedicated DevOps team.
- **Established the engineering platform for TPRI**, designing the monorepo architecture, CI/CD pipelines, testing frameworks, deployment model, package management, and standards that accelerated velocity and long-term platform maintainability.
- Provided **technical leadership and mentorship to a 15-member engineering team** across backend, cloud infrastructure, distributed systems, AI engineering, and frontend applications, driving architecture decisions, engineering standards, onboarding, and end-to-end delivery.
- Partnered closely with Product, Sales, Customer Success, and executive leadership to translate customer needs into technical strategy, influencing product roadmap, onboarding experience, AI capabilities, and enterprise adoption.
- **Led executive architecture and product demos throughout the product lifecycle**, presenting to **the CEO, the CTO, and SVPs** to communicate technical strategy, product capabilities, and helping secure executive alignment and launch approval.
- Designed and built an **AI Evals framework** using ~5K human-annotated records, combining **ground-truth benchmarking, precision/recall analysis, and LLM-as-a-judge evaluation** to measure model and provider quality, detect regressions, and enable data-driven optimization of AI screening systems.
- Partnered with internal security teams and external assessors to lead **penetration testing, vulnerability remediation, and security readiness**, securing final sign-off and supporting **FedRAMP Class A certification** for enterprise cloud services.

AI-Powered Playwright Test Automation

- **Architected and built an AI-powered Playwright automation framework** in three days, leveraging Amazon Bedrock, Strands Agents, Playwright MCP, and Playwright Codegen to automatically convert structured manual test cases into production-ready Playwright TypeScript tests with built-in validation, self-healing, and engineering guardrails.
- Accelerated a critical UI modernization initiative by generating **1,500+ Playwright end-to-end test cases**, enabling the engineering team to meet committed delivery timelines while reducing manual automation effort.
- Designed a production-grade multi-agent workflow comprising specialized **code generation, autonomous repair (run-to-green), and quality evaluation agents**, combining Playwright MCP browser automation with repository-aware code

generation, deterministic validation (Zod schemas, TypeScript compilation, Playwright verification), and objective coverage scoring against manual test cases to produce reliable automation.

AWS Cloud Migration & Platform Modernization for TPM

- Led the end-to-end migration of Diligent's $20M ARR Third-Party Management (TPM) product from **Microsoft Azure to AWS**, defining the cloud migration strategy and driving architecture, infrastructure, application modernization, CI/CD transformation, database migration, and Diligent One integration.
- **Modernized the platform architecture** by standardizing AWS-native patterns, Infrastructure-as-Code, and deployment pipelines, improving scalability, reliability, and engineering velocity.
- Architected a serverless scheduled job as a replacement for the legacy cron infrastructure, improving resiliency while **reducing infrastructure costs by ~$60K annually**.
- Authored architecture proposals and engineering standards for cloud migration, IAM, onboarding, AI security, and platform integrations, influencing engineering practices across multiple teams.
- Provided **technical leadership** across the migration, mentoring 10 engineers, driving architecture reviews, and resolving complex cross-team technical challenges.
- Architected and deployed a scheduled and on-demand AWS resource cleanup service using **open-source aws-nuke**, automating cleanup of unused resources across lower environments and controlled higher-environment runs, delivering **~$35K in annual AWS cost savings**.

Custom Terraform Data Platform & Alt-SDK

- Architected Alt-SDK, Diligent's internal Terraform provider alternative for enterprise-scale GRC provisioning, using a **microservices-based architecture** and real-time **WebSocket CLI**; delivered a Fargate architecture POC demonstrating **3x performance improvement** and securing production approval.
- Led an 8-engineer team delivering changeset generation, execution ordering, and child-resource parallelism, achieving **2x performance gains**; developed a custom Go-based Terraform provider and **reusable AWS CDK WebSocket construct** adopted by 3 engineering departments.

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- Engineered enterprise-grade web and mobile applications using **Node.js, Express, Vue.js, MongoDB, and Ionic**, designing scalable REST APIs within an Agile SDLC.
- **Led a 4-member engineering team** for the back-office ecosystem, owning architecture, technical lifecycle, and enterprise delivery; drove a one-month **AngularJS → Vue.js** frontend migration.
- Partnered with **VP-level Product leadership** to integrate **Pendo analytics**, using data-driven insights to improve customer retention and accelerate sales growth.
- Architected **AWS S3 automated backups** with on-demand production–staging synchronization, and developed a **FullCalendar-**based supply chain scheduling engine for real-time logistics visibility.

TECHNICAL SKILLS

- **Architecture and Engineering:** Distributed Systems | Event-Driven Architecture | Microservices | Domain-Driven Design | Infrastructure-as-Code | CI/CD | Platform Engineering
- **Generative AI and Agentic Automation:** Strands Agents SDK | Claude Agent SDK | LangChain | LangGraph | Amazon Bedrock | Bedrock AgentCore | RAG | Bedrock Knowledge Bases | Zod | Langfuse | Evals | Playwright MCP
- **Programming Languages:** TypeScript | JavaScript | Go | Python
- **Cloud and Infrastructure:** AWS CDK | Terraform | Lambda | Fargate | ECS | ECR | S3 | EC2 | VPC | API Gateway | ALB | SQS | SNS | EventBridge | CloudFront | OpenSearch | IAM | WAF | CloudWatch | CodeBuild | CodePipeline | Jenkins
- **Databases and Data Access:** Amazon Aurora PostgreSQL | MongoDB | Amazon DocumentDB | DynamoDB | Redis | ScyllaDB | DragonflyDB | Pinecone | LanceDB | Qdrant | pgvector | AWS Opensearch | Prisma ORM | Mongoose
- **Backend Development:** NestJS | Node.js | Express.js | Koa | REST APIs | GraphQL | Apollo GraphQL
- **Frontend Development:** React | Next.js | Vue.js | Redux | Ionic | Vite | Webpack | Figma
- **Testing and Quality Assurance:** Strands Evals | DeepEval | Playwright | Cypress | TestCafe | Jest | Vitest | Mocha
- **AI Assistants & Developer Tools:** Cursor | Claude Code | OpenAI Codex | GitHub Copilot | Devin | Windsurf | v0 | Lovable

EDUCATION

- Bachelor of Engineering in Computer Science | Nagarjuna college of Engineering & Technology | 2014 - 2018

HONOR AWARDS

- Diligent Global Engineering Excellence Award - Q2 2026
- Oracle Generative AI Professional 2024
- 5 consecutive Hackfest wins at Diligent