KRISH ARYAN

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SUMMARY

Site Reliability Engineer with 1.5+ years owning production reliability across 215+ services at Netradyne. Prevented 3 Sev-1/P0 incidents on-call; sole engineer on a PostgreSQL→DynamoDB migration; core architect of org-wide multi-cluster enablement. Designed and shipped TraceLens — an autonomous AI-driven RCA platform (40+ tools, 12+ data sources) that reduced incident triage from ~2 hours to 15 seconds (480×), live in production. Driven to build infrastructure that self-heals, self-explains, and scales without adding headcount.

SKILLS

Reliability & Operations: Incident Response, Root Cause Analysis, On-Call Operations, SLO/SLA/SLI Design, Anomaly Detection, Change Management, Capacity Planning

Cloud & Infrastructure: AWS (EKS, EC2, S3, Lambda, SQS, Kinesis, DynamoDB, MWAA, CloudWatch, ASG), Kubernetes, Docker, Nginx, Load Balancing, Reverse Proxies

Observability & Monitoring: Prometheus, Grafana, ELK Stack, OpenTelemetry, Tempo, Datadog, PagerDuty, Sentry, CloudTrail

AI & Agentic Systems: ReAct loop design, Native LLM tool-calling (no frameworks), Azure AI Foundry, Anthropic Claude, MCP (Anthropic-certified), AWS Bedrock

Programming & Automation: Python, FastAPI, Shell Scripting, JavaScript, Java, gRPC, REST APIs, n8n Automation Workflows

Databases: PostgreSQL, DynamoDB, MongoDB, ClickHouse, Redis, Elasticsearch

EXPERIENCE

NETRADYNE | Bengaluru, India **Feb 2025 – Present**

Software Engineer – Site Reliability Engineering

- Own production reliability across **215+ microservices** on AWS; serve as primary on-call engineer leading Sev-1 and Sev-2 incident bridges end-to-end, performing live debugging across distributed logs, metrics, and traces.
- Prevented **3 Sev-1/P0 production incidents** during on-call rotations through proactive pattern recognition across signals — directly avoiding customer-facing outages before they materialized.
- Designed and deployed **TraceLens**, an autonomous AI-driven RCA agent with 40+ specialized tools spanning 12+ data sources (Elasticsearch, Prometheus, S3, CloudWatch, Grafana, Sentry, GitHub, Jira, Airflow MWAA, PagerDuty); reduced incident triage **from ~2 hours to ~15 seconds — a 480× improvement** — live in production at agents.sre.netradyne.info.
- Engineered a **ReAct Log Analysis Agent** running directly on the S3 mount instance, using bash tools (grep, awk, zcat) to interrogate 200k–30M log lines per service per day without any ingestion pipeline or vector database — zero overhead, instant results.
- Built an **Exception Clustering system** — an org-centric Sentry alternative that groups, deduplicates, and surfaces exception patterns across 185+ services tuned to internal topology; fully replaced a paid SaaS observability tool.
- Designed and deployed **Anomaly Detection systems** for API latency and traffic rate deviations; built **SLO/SLI automation** with early-warning alerting pipelines that fire before burn-rate crosses critical thresholds across all core business functions.
- Sole engineer responsible for **migrating critical production data from PostgreSQL to DynamoDB** — executed schema redesign, migration pipeline, and zero-downtime cutover independently.
- Architected and operate org-wide **n8n automation infrastructure on AWS EKS**, eliminating manual engineering workflows; implemented GitHub Production Diff Automation for real-time change tracking and rapid rollback identification.
- Designed and maintain the core observability stack (Prometheus, Grafana, ELK, CloudWatch); led cost-cutting by building internal replacements for paid SaaS tools — contributing to measurable reduction in engineering tooling spend.

PROJECTS

TraceLens — Agentic AI Observability & RCA Platform

Production-deployed autonomous incident investigation system — agents.sre.netradyne.info/incident-analysis-agent

- Implemented a native tool-calling ReAct loop (no LangChain, no agent frameworks) with 40+ specialized tools; agent self-selects optimal data source per metric across 12+ integrated sources, delivers structured confidence-scored hypotheses with evidence chains, and auto-generates Jira incident tickets.
- Built FastAPI + SSE streaming backend, React 18 + Vite + Tailwind dark terminal frontend, PostgreSQL-backed investigation history with JWT authentication — fully deployed on AWS EKS with Nginx reverse proxy.

Log Analysis Agent — S3 ReAct CLI + Browser UI

Filesystem-native agentic log intelligence tool for high-volume production log analysis — agents.sre.netradyne.info/log-analysis-agent

- Designed a ReAct agent treating bash tools (grep, awk, zcat, zgrep) as its toolset — runs directly on the production S3 mount, interrogating 200k–30M daily log lines per service without any ingestion infrastructure.
- Supports @service-name pinning, --date/--range timeline flags, /export and /clear commands, rich terminal UI comparable to Claude Code; backed by Azure AI Foundry (GPT-4o) via OpenAI-compatible SDK.

CERTIFICATIONS

Anthropic: Introduction to Model Context Protocol • Model Context Protocol – Advanced Topics • Claude 101
Amazon Web Services: Cloud Practitioner Essentials • Getting Started with DevOps on AWS
ClickHouse: ClickHouse Database Associate • chDB Professional

RESEARCH PUBLICATIONS

- Real-Time Biometric Facial Recognition Attendance System — ACT 2024; Scopus Indexed, GRENZE International Journal of Engineering and Technology.
- Privacy-Preserving Border Surveillance System — I-SMAC 2024; Published in IEEE Xplore.

EDUCATION

New Horizon College of Engineering, Bengaluru **2021 - 2025**

Bachelor of Engineering, Artificial Intelligence & Machine Learning | GPA: 9.24 / 10