Tarush Sinha

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EXPERIENCE

Citadel Health   Aug 2025 – Present

Technical Consultant

- Prototype telehealth flows with GCP Vertex AI Agent (LLM) and Dialogflow CX (NLM) for virtual care capabilities

TikTok U.S. Data Security, Inc.   Oct 2021 – Jun 2025

Research & Development Engineer — TikTok Data Platform

Data Ingestion Product Owner   Jan 2022 – Jun 2025

- Owned the Data Ingestion roadmap: drove quarterly planning, prioritization and alignment across domestic & international Ads, Compliance, Infrastructure, Platform, Product, Recommendation, and Security teams
- Onboarded multiple new business lines including Lemon8, Pangle, & StemDrop to the ingestion platform, translating ambiguous requirements into concrete ingestion specs and scalable implementation plans

Senior Site Reliability Engineer (SRE); Tech Lead   Mar 2023 – Jun 2025

- Accelerated global data stream processing performance by 10x and reduced CPU utilization by 55% across 100+ jobs by building and delivering an efficient unified streaming engine
- Rebuilt Data Ingestion Platform in a backup data center for disaster recovery to support active-active failover
- Re-engineered the Data Ingestion Platform for efficiency and scalability by (i) shifting root traffic from NSQ & Kafka to RocketMQ, and (ii) optimizing routing strategies to cut Kafka cluster pressure by 60%
- Designed and implemented a comprehensive testing architecture for the Data Ingestion Platform, introducing integration tests for the core ingestion services and supporting validation for three tiers of Flink ETL jobs
- Created a Data Ingestion health dashboard with RAG scoring and component-specific KPIs, enabling SREs to rapidly monitor degradation points and giving leadership real-time analytics on platform health
- Improved reliability of a critical ingestion Thrift service (supporting Law Enforcement & Debug teams) by 87%, and developed a feature for validation of L4 data requests
- Implemented event governance controls by introducing event sampling (reducing key topic volume by 40%) and building dynamic rule-banning logic in the ETL engine to prevent unexpected traffic bursts
- Developed a Spring Boot job autoscaling feature for Firefly (BitSail-based data integration engine), improving resource utilization under capacity constraints and fluctuating traffic
- Built a Go-based CLI tool to automate creation of new data flows, reducing request turnaround time by 90%

Site Reliability Engineer (SRE)   Oct 2021 – Mar 2023

- Maintained platform stability, led incident response & ensured 99.99% SLA adherence for downstream systems
- Reduced core ingestion alerts by 85% through implementation of a pod auto-migration mechanism
- Unified alarm data into a warehouse, built FlinkSQL powered tooling to improve signal-to-noise ratio by 30%

Infosys, Ltd.   Oct 2020 – Oct 2021

Associate

- <u>Boeing</u>: Cloud DevOps Engineer for Airplane Telemetry Predictive Analytics Platform. Tech Stack: ELK, GCP
- <u>Nike</u>: Java Full Stack Engineer. Tech Stack: Java(Spring Boot), Angular, REST, TypeScript, Splunk

EDUCATION

B.S. Computer Science, University of Maryland, College Park   Aug 2020

SKILLS

Technologies: Python, Java, Go, Bash, Ruby, C, JS, TypeScript, AWS, GCP, Docker, Kafka, Flink, Kubernetes, SQL
Certifications: ICAgile Certified Professional - Agile Team Facilitation, Infosys Certified Java Full Stack Developer
Trilingual: English, Hindi, Mandarin