

Sarthak Kothari

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EDUCATION

Northeastern University, Boston, MA

College of Computer and Information Science

Sept 2017 – Dec 2019

Master of Science in Data Science

Relevant Courses: Parallel Data Processing, Algorithms, Data Mining.

K. J. Somaiya College of Engineering, Mumbai, India

Secured a Bachelor of Engineering in Computer Science.

Aug 2013 – Jun 2016

WORK EXPERIENCE

Amazon Web Services (AWS), Seattle, WA

May 2024 – Present

Software Engineer.

- Led the design & implementation of the control plane for EKS Auto Mode, decoupling its CRUD workflows from the legacy EKS control plane by creating independent, Lambda-backed APIs that routed operations to the correct data-plane cell with 99.99% success, full monitoring/SLA coverage, and an extensible architecture later leveraged to launch ArgoCD, KRO, & ACK capabilities.
- Owned end-to-end architecture of the authorization, throttling, routing, and metrics ingestion services, delivering secure, rate-limited traffic from internal services to customer EKS clusters, scaling to 10,000+ TPS at 30ms P99, and operating a metrics pipeline processing 20,000+ metrics per minute.
- Developed and drove adoption of a generic Kubernetes operator library used across compute, storage, and networking components of EKS Auto Mode, providing reusable controllers that watched component CRDs and automated pod identity management, access entry provisioning, CRD installation/removal, and component lifecycle management across cells.
- Leading the design of a billing-aware component for the communication platform, introducing centralized usage tracking and billing integration to enable adoption by other internal AWS teams and customers while simplifying and standardizing secure communication with EKS clusters.

Nightfall.ai, Vancouver, BC

Oct 2021 – May 2024

Software Engineer.

- Spearheaded design and implementation of a distributed platform with a team of 3 engineers, scanning customer historical data across integrations and handling 300GB+ per scan. Supported concurrent scans with fairness, fault-tolerance, and completion guarantees. Built 5 different GoLang microservices deployed on Kubernetes, leveraging Kafka and gRPC for communication. Data persisted in CockroachDB, Redis, Snowflake, EFS, and S3.
- Designed and built a highly available violation service to store, remediate, and report violations across integrations. Supported 100K+ records/hr ingestion and retrieval using gRPC and CockroachDB.
- Refactored a legacy, resource-intensive integration, boosting efficiency 40% and reducing codebase by 22K LOC. Established modular, reusable architecture, cutting error rate 98% and enabling faster feature adoption. Led a team of 2 engineers.
- Improved integration data pull/scan time from 1 min to 4 sec using Temporal workflows, enabling near real-time notifications and remediations.

ClosedLoop.ai, Austin, TX

Jan 2020 – Sep 2021

Software Engineer.

- Designed, developed, and deployed a scalable microservice using docker on AWS EC2 instances. This service is responsible for managing models, triggering predictions, and generating reports for new customer data using Scala.
- Redesigned automatic report generator to include predictions from multiple models by tracking model completion via MongoDB & AWS SQS, significantly increasing platform's reporting efficiency ($\geq 50\%$) & reducing customer overheads.
- Conceptualized, designed, and successfully implemented a comprehensive tagging service, empowering customers to uniquely label and categorize all objects within the platform with their custom-created tags.
- Implemented feature drift tracking by calculating population stability index between model populations in Python & Scala helping customers detect stale models and re-train them for better accuracy.
- Boosted platform's model training & testing time by 25% by parallelizing data preparation leveraging AWS SQS.

Staples Inc., Framingham, MA

Jan 2019 – Aug 2019

Software Engineer Intern – Operations.

Hansa Cequity, Mumbai, India

Aug 2016 – Aug 2017

Software Engineer.

TECHNICAL KNOWLEDGE

Programming Languages

: Go, Scala, Python, Java, React, etc.

Databases & Storage Technologies

: CockroachDB, S3, EFS, MongoDB, Spark, Snowflake, Neo4j, etc

Tools, frameworks & Cloud Technologies

: Docker, Kubernetes, CircleCI, Jenkins, Lagom, Play, AWS, GCP, Git, Jira.