

Nuthan Reddy

Senior Software Engineer | Technical Lead

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SUMMARY

Senior Software Engineer and Technical Lead with 10+ years of experience architecting scalable data systems and leading high-performing engineering teams. Expert in distributed systems, cloud platforms, and big data technologies.

WORK EXPERIENCE

Microsoft

Mar 2022 – Present

Senior Software Engineer

Hyderabad

- Directed Privacy Signals Team managing data deletion, export delivery, processing and compliance reporting across Microsoft services.
- Architected and delivered 2-20x performance improvements in Data Scanning by eliminating bottlenecks and non-deterministic code.
- Designed and deployed scalable Data Map solutions with APIs for asset tagging and updates, improving data governance.
- Established deployment, monitoring and alerting frameworks for the Signals Team, ensuring high reliability and observability.

Walmart

Oct 2020 – Mar 2022

Software Engineer III

Bangalore

- Managed development of rule-based data processing framework for Enterprise Business Services Teams.
- Crafted modularized CILL rules engine with config-driven architecture for improved maintainability.
- Developed Code Freeze App using Go to automate GitHub repo management via Slack, streamlining deployment processes.

Sigmoid

Jan 2019 – Oct 2020

Software Development Engineer I

Bangalore

- Built planet-scale streaming pipeline supporting 100k req/sec, 1GB/sec throughput presented at Apache Con NA 2020.
- Spearheaded implementation of BigQuery-based NitroDB achieving 30% cost reduction while maintaining performance.
- Designed and deployed multi-tenant search feature with Elasticsearch integration, delivering responsive experience for multiple organizations.
- Contributed critical bug fixes to spark-snowflake as committer, ensuring data correctness at scale.

Capgemini

Jun 2015 – Jan 2019

Consultant P2

Bangalore

- Delivered enterprise data solutions for clients across multiple industries.
- Facilitated technical design sessions and translated complex business requirements into scalable architectures.
- Mentored junior team members on software development and data engineering best practices.

PROJECTS

Azure Data Governance | *Python, Synapse, C#, Terraform, Kubernetes*

- Directed Privacy Signals Team managing data deletion, export delivery, and compliance operations
- Optimized Data Scan to achieve 2-20x improvement by removing bottlenecks and non-deterministic code
- Created APIs to tag/update assets for Data Map and enhanced scalability with a variety of techniques
- Constructed deployment, monitoring and alerting frameworks for Signals Team

EBS Data Pipeline Framework | *Spark, Scala, GCP, Go, Slack*

- Created rule-based data processing framework for the Enterprise Business Services Teams
- Crafted modularized CILL rules and applied config-driven architecture
- Developed Code Freeze App to freeze GitHub repo from Slack using Go

Ad Pre-bid Pipeline | *Kafka, PubSub, DataFlow, Java, Helm, Kubernetes, Docker*

- Architected planet scale cost-effective streaming pipeline supporting 100k req/sec, 1GB/sec (14k req/sec/core) and 10k concurrent users - presented at Apache Con NA 2020
- Deployed all services to GKE with auto-scaling based on load
- Configured circuit breaker to redirect data to PubSub + Dataflow improving reliability when Kafka + Kafka Connect is down

NitroDB on BigQuery | *Apache Spark, BigQuery, NitroDB*

- Evaluated Percentile function in BigQuery and deployed percentile at scale using t-digest algorithm achieving 10-100x performance on pre-aggregation
- Evaluated, tested and deployed NitroDB on BigQuery reducing costs by 30%

NitroDB Search Optimization | *Elasticsearch, NitroDB*

- Designed responsive search feature for multi-tenant (multi-organization) use case where each organization sees different set of options
- Integrated Elasticsearch with NitroDB and created update/reindexing strategy

Snowflake ETL | *Apache Spark, Snowflake, Python*

- Contributed as one of the committers of spark-snowflake, fixing critical bugs involving data correctness
- Constructed ETL pipeline for Snowflake using Python
- Administered Snowflake for costs, permissions and External Data Source (GCS)
- URL: <https://github.com/snowflakedb/spark-snowflake>

EDUCATION

Indian Institute of Technology (IIT) Kharagpur <i>Bachelor of Technology, Industrial & Systems Engineering</i>	2011 – 2015
Sri Chaitanya Jr College, Gudavalli <i>XII, Board of Intermediate Education</i>	2009 – 2011
Gowtham Concept School, Gudivada <i>X, Board of Secondary Education</i>	2008 – 2009

SKILLS

Core Technologies : Python, Scala, Java, SQL, Apache Spark, Kafka, Kubernetes, Docker

Cloud & Data Platforms : AWS, Azure, GCP, Snowflake

Key Competencies : Data Engineering, Distributed Systems, System Design & Architecture, Data Privacy & Compliance, Leadership & Mentoring, Cross-Functional Collaboration, Problem Solving