Sai Srinath Josyula

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CAREER SUMMARY

Staff Software Engineer with over 9 years of experience in backend development, distributed systems, and end-to-end project management. Proven expertise in building APIs, backend systems, and distributed data handling for mobile and desktop analytical platforms. Adept at developing batch and stream applications, managing production systems, and leading teams to deliver high-quality software solutions at scale. Successfully handled production systems with over 1 million active users/transactions per sec.

EDUCATION

Masters in Information Technology

Arizona State University, AZ

Jan 2017 – Dec 2018 | CGPA: 4/4

Related Coursework:

- Analyzing Big Data, Advance Data Analytics, Cloud Computing, Advanced SQL Techniques, System Administration of Unix, Software Engineering, Networking, Algorithms and Data Structures.

SKILLS AND ABILITIES

Languages:	Java, Python, Scala, JavaScript
Web Technologies:	HTML, XML, JavaScript, jQuery, ReactJS, Bootstrap, CSS
Big Data:	Spark, MapReduce, Kafka, HBase, Hive, Oozie
API Related:	Spring, ReactJS, GraphQL
Others:	Azure Blob Storage, Jenkins, XLR, Docker, AWS, Google Cloud, Maven, Kubernetes, Event Engine

WORK EXPERIENCE

Intuit Sept 2025 – Present

Staff Software Engineer

- DeepTap-Spy: Unified Driver Telemetry Library — Built DeepTap-Spy, a zero-code instrumentation library providing unified observability across JDBC, Cassandra, Redis, Kafka, and AWS SDK v2 (DynamoDB, S3, SNS), etc. The dual-mode architecture leverages native Micrometer integration where available and employs custom interceptors for drivers lacking native support. A metric mapping layer categorizes hundreds of disparate metrics into nine standardized buckets: Connection, Request, Reliability, Throughput, Resource, Query Insights, Node Topology, Identity, and Extras. Pluggable exporters support Prometheus, Wavefront, JSON logs (Splunk), and OTLP. Architected for extensibility—new drivers and observability platforms integrate via well-defined interfaces.
- Designed and implemented a production-grade distributed locking framework for Intuit's Account Service managing 10M+ merchant payment accounts across 100+ pods. The cache-agnostic architecture uses Redis, supporting composite lock keys with configurable PII masking for compliance. Built retry mechanisms with four pluggable policies (Exponential Backoff, Decorrelated Jitter, Fixed Delay, Max Attempts) to handle lock contention, plus an automatic watchdog for lease extension during long-running operations. Integrated optional fencing tokens with monotonically increasing versioning to prevent stale writes in distributed scenarios. Implemented MDC-integrated owner ID generation capturing intuit_tid, intuit_app_name, and request context for complete audit trails. Structured JSON logging with 15+ MDC fields enables engineers to efficiently debug production issues using transaction IDs or application context.
- Drove 99.99999% availability with 0 504s, 0 500s, 0 release downtime, and 0 connection failures on a 15+ year-old legacy application—eliminating daily pager alerts that had been disrupting productivity; filled tech

gaps and improved reliability through scaling, traffic shaping, and controlled rollouts.

U.S. Bank May 2020 – Sept 2025

Senior Software Engineer

- Designed and implemented a highly scalable Ephemeral Search Service on Azure Blob Storage, enabling advanced search capabilities such as wildcards, range-based searches, exact matches, pagination, sorting, and limiting features. Established Spark batch pipelines to transfer data from Cassandra to blob storage, resulting in a cost reduction of approximately $3 million for the company by eliminating costly indexes, high computational resources needed for servers to run these indexes, and the maintenance needed for indexes and production issues. This service is currently used by US Bank to fulfill transaction search and wildcard text search requirements for mobile, online, and internal applications.
- Architected and fully automated the creation of a GraphQL microservice, eliminating manual intervention by automating GraphQL schema file generation, GIT project creation, code generation, Jenkins job creation, Postman collection generation, and Karate test suite creation. Enabled consumers to deploy a GraphQL microservice in 5 minutes by inputting Cassandra keyspace and table name. Currently, over 500 GraphQL microservices are running in production.
- Implemented robust security measures, including JWT generation and validation, to secure API endpoints, enhancing the overall security posture of the services.
- Developed custom circuit breaker logic to significantly enhance the resilience and reliability of microservices, currently utilized across multiple APIs.
- Built an internal ReactJS application, leveraging Apollo GraphQL and React Router for seamless integration with backend services, improving internal workflows and efficiency.
- Created utilities for seamless data integration with Kafka, enabling efficient message processing across various payload structures, enhancing data flow and processing capabilities.
- Applied industry-standard design patterns and best practices to ensure high code quality and maintainability, contributing to the development of robust and scalable frameworks.
- Utilized Maven for project management and build automation, streamlining the development process and improving productivity.

Impetus Jan 2019 – May 2020

Software Engineer

- Contributed to the Batch Processing team, developing complex MapReduce and Spark applications using Java, Scala, and Python to process large volumes of data efficiently.
- Extracted data from source Hive tables, applied Drools rules, and loaded the processed data into HBase tables. Developed shell scripts for archiving batch data and Oozie scripts for job scheduling.
- Developed a standalone Java application to read data from Hive and HBase tables and push it to Kafka in the required format. The application is triggered using the Event Engine job scheduler. Also developed Kafka consumers for data consumption and testing.
- Proficient in using build tools like Maven and Gradle and experienced in using XLR to manage the entire Software Development Life Cycle.

EdgeVerve Dec 2014 – Dec 2016

Software Engineer

- Built RESTful web services using Java and Spring, with Cassandra as the backend database, ensuring efficient data handling and retrieval.
- Developed enhancements for Finacle Treasury, including migrating application server configurations to the database, improving system manageability and performance.

MASTERS PROJECTS

Twitter-Review Analysis Application

Developed an application to provide review analysis of places, food, events, etc., through charts. Utilized Django for the user interface, deployed the application on Google App Engine, stored Tweets in BigQuery, and visualized data using Google Data Studio.

Technologies: Python, Django, Google App Engine, BigQuery, Google Data Studio.

Meetup Portal for ASU Polytechnic Campus

Created a portal enabling students and faculty to organize meetings and share knowledge.

Technologies: Java, JDBC, Servlets, HTML, CSS, JavaScript.

Photo-voltaic Module Certification Portal

Built a fully functional portal for Photo-voltaic Module certification using Python and the Django framework. Employed MSSQL as the database and implemented stored procedures, cursors, triggers, views, and dynamic SQL.

Technologies: Python, Django, MSSQL.