Harshvardhan Surolia

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Professional experiences

Amazon Web Services East Palo Alto, CA

Software Dev Engineer | Redshift Builder Experience June 2025 – Jan 2026

- Owned end-to-end automation for AddressSanitizer (ASAN) testing, enabling automatic memory error detection, stack trace generation, and ticket routing, **eliminating manual triage and reducing time-to-resolution**.
- Modernized CI/CD and testing infrastructure by migrating testing workflows from Jenkins to native orchestration tooling with a CLI-driven developer experience, **simplifying build and test execution and reducing developer feedback latency**.
- Improved developer productivity and observability by implementing real-time Slack notifications for build and test status across Redshift engineering teams, **removing manual polling and enabling faster failure triage and iteration**.
- Migrated critical build jobs off Jenkins to a modern build system, adding modular steps, cancellation cleanup, and CDK-based infrastructure to standardize and simplify maintenance.

Software Dev Engineer Intern | Redshift Builder Experience May 2024 – July 2024

- Built a near real-time, event-driven ETL pipeline using AWS Lambda and Redshift, reducing data latency from **24 hours to under 2 seconds.**
- Improved reliability and observability by adding automated retries via SQS, CloudWatch-triggered ticketing, and QuickSight dashboards, reducing manual intervention and **improving triage time by 75%.**

Walmart Global Tech Bengaluru, India

Senior Software Engineer | Order Management System Aug 2020 – July 2023

- Spearheaded real-time monitoring app, cutting MTTD anomalies. The high-speed dashboard, **over 2 minutes faster than existing solutions**, became primary support tool, pivotal in holiday sales support, and earned leadership recognition.
- Engineered high-performance Java application to efficiently extract data from multiple Kafka sources. Implemented Jolt for JSON flattening, data enrichment, and unified topic publication. The application **handles 1 TB data every day**.
- Implemented automated flows using Apache NiFi for auto-healing and Root Cause Analysis (RCA) in order processing, **resulting in a 16% reduction in cancellation rates and revenue optimization**.
- Collaborated on universal connector for cosmos change feed, **cutting on-boarding to 10 minutes**. The connector manages **800 million records daily**, with an added error framework for seamless exception handling.

Software Engineering Intern | Order Management System Jan 2020 – July 2020

- Developed DB password utility, reducing password update time from **48 to 2 hours, boosting team productivity**.
- Innovated email dashboard with Kibana and Elastic Search to track email delivery time and identify unsent customer emails.

Technical Skills

- **Technologies:** AWS (S3, Lambda, Glue, Athena, Redshift, QuickSight, CloudWatch, DynamoDB, Step Functions), CDK, Apache Pinot, Apache NiFi, Thirdeye, Apache Kafka, Linux, Git, Maven, Shell scripting, Jenkins, Junit
- **Languages**: Java, C, Python, Ruby on Rails, Javascript, SQL, HTML/CSS
- **Interests**: Analysis of Algorithms, Software Engineering, Artificial Intelligence, Operating Systems, Software Security, Network Security, Cryptography, Data Analytics in Cyber Security,

Education

Texas A&M University, College Station, TX Aug 2023 - May 2025

Master of Computer Science, **GPA** 4.0/4.0

PES University, Bengaluru Aug 2016 – Jun 2020

B.Tech in Computer Science and Engineering, **GPA** 9.39/10

Projects

PhD Annual Review System Aug 2023 – Dec 2023

- Streamlined and enhanced efficiency of the PhD Annual review process at Texas A&M University.
- Increased faculty and student productivity by streamlining processes, presenting information more concisely. The restructured system **reduced review time by 25%**.

Flavor Enhanced Food Recommendation System Jan 2020 – Jun 2020

- Proposed a hypothesis, that a user prefers a dish or similar dishes not because of presence of similar ingredients or flavors but specific flavonoids (chemical compounds) present in the dish.
- Fostered both a traditional content-based recommendation system and a deep neural network-based model. The model incorporating flavonoid features surpassed basic traditional models by more than 50% in accurately predicting ratings.