NILESH THADANI

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SENIOR SOFTWARE ENGINEER • BACKEND SYSTEMS • DISTRIBUTED ARCHITECTURE

PROFILE

Backend engineer with nearly 10 years of experience across Amazon, JPMorgan Chase, HERE Technologies and SAP Labs. Experienced in distributed systems, event-driven architecture, cloud infrastructure, data engineering and mission-critical financial platforms. Delivered approximately $4M in customer-support cost savings, $180K in annual infrastructure savings and mitigation of $1M+ in potential compliance penalties.

TECHNICAL SKILLS

Languages: Java, Scala, Python, PHP, SQL
Backend & frameworks: Spring Boot, Akka HTTP, Django, Laravel, Bootstrap
Distributed systems: Microservices, event-driven architecture, asynchronous processing, system design, reliability engineering
Data & storage: DynamoDB, OpenSearch, Oracle, MySQL, PostgreSQL, Firestore, S3, Apache Parquet
Cloud: AWS Glue, RDS, S3, MWAA, Lambda, Step Functions, SNS, Kinesis; GCP
Practices: Database schema design, data migration/backfills, performance tuning, CI/CD, cost optimization

PROFESSIONAL EXPERIENCE

AMAZON | Software Development Engineer II | Bengaluru | Oct 2022 – Present

VC NEXT (VENDOR CENTRAL NEXT) | Feb 2026 – Present

- Technical lead for a team of 7 engineers driving externalization of 100+ Vendor Central APIs for integration with AI models and third-party partners.
- Designed an AI-powered engineering agent that identifies the owning domain team and code package for a Vendor Central page/API, generates code changes and raises draft code reviews—automating a previously manual discovery and coordination workflow.
- Defined API-generation, MCP integration and onboarding architecture, coordinating dependencies with 20+ partner teams.
- Architected a prepayment eligibility pipeline that backfilled 120M records in approximately 3 hours and processes 500K scheduled daily events in 20–25 minutes, meeting the required error-rate threshold of below 1%.
- Re-engineered vendor prepayment tracking to provide real-time payment-status visibility and establish a foundation for financial recovery and reconciliation.

AWS MANAGED WORKFLOWS FOR APACHE AIRFLOW (MWAA) | May 2025 – Jan 2026

- Owned root-cause analysis and corrective architecture following the October 2025 global outage, during which MWAA recovery took approximately 48 hours versus approximately 12 hours for other AWS services.
- Designed and secured approval for an availability-aware environment-update mechanism that monitors downstream dependencies and major infrastructure events, pauses updates during disruptions, preserves access to the previous environment version and supports customer-controlled resumption.
- Improved operational reliability with exponential-backoff and jitter retry logic for downstream failures and root-cause fixes to environment provisioning. The approved update-orchestration design was projected to reduce recurrence of similar failures and associated support tickets by 85%; implementation was handled by other engineers.

VENDOR INVOICE MANAGEMENT | Oct 2022 – Apr 2025

- Architected an event-driven data platform that extended a legacy UI-only invoice application with personalized financial insights and recommended actions, using SNS, Lambda, Step Functions, DynamoDB, S3, Kinesis and OpenSearch.
- Designed batched event processing that consumes upstream invoice changes through SNS, groups events into batches of 10 and invokes domain services for scalable processing.
- Built an automated backfill workflow for 150M historical invoices from Parquet datasets, completing the migration in 37 hours using AWS Glue and two Lambda functions.
- Implemented asynchronous reconciliation and auto-healing against the legacy system to identify and repair data inconsistencies in the new platform.

- Engineered a generic data framework providing standardized access across DynamoDB, OpenSearch and S3, improving developer velocity.
- Enabled personalized invoice insights and recommended actions, contributing to 480K fewer customer contacts and approximately $4M in associated support-cost savings.
- Re-architected storage from a DynamoDB–OpenSearch model to DynamoDB–S3–OpenSearch, reducing annual infrastructure costs by $180K.
- Re-engineered the EU Tax Compliance framework (Project Murre) into a scalable, multi-region solution for complex vendor invoice regulations.

EARLIER EXPERIENCE

JPMORGAN CHASE | Associate | Mumbai | Dec 2020 – Oct 2022

- Engineered core transaction algorithms and high-throughput microservices, implementing enhancements that improved transaction reliability and processing speed.
- Architected and scaled the global Rules Engine, deploying complex business logic to adapt to changing market regulations and dynamic trading requirements.
- Spearheaded AssetViewer, an AngularJS internal platform used by thousands of employees to manage multi-million-dollar dividend transactions.
- Owned feature enhancements end to end, managing the SDLC from initial system design through global deployment; recognized with multiple awards for technical excellence and architectural upgrades, including zero-downtime go-lives.

HERE TECHNOLOGIES | Software Engineer II | Mumbai | Jul 2019 – Nov 2020

- Developed graph-traversal algorithms to validate regional lane connectivity and ensure navigational data integrity.
- Engineered a stitching algorithm to merge redundant spatial objects, reducing database load.
- Automated the Map-Making pipeline through core microservices, scaling the internal mapping platform for 400+ users.
- Received the Best Innovator award for creating an automated lane-routing validation framework.

SAP LABS | Developer Associate | Bengaluru | Dec 2016 – Jan 2019

- Engineered the Split Query feature for the Metadata Framework (MDF), improving high-volume data retrieval query performance by 30%.
- Reduced system memory footprint and latency by re-architecting core platform algorithms and optimizing complex database queries.
- Developed a Global Maintenance Job to automatically resolve schema and data inconsistencies across customer environments, reducing operational and support overhead.
- Built and maintained generic, scalable platform components that accelerated product time-to-market for cross-functional teams.

RECOGNITION

- Tech Simplification Award – infrastructure optimization initiative
- Best Innovator – HERE Technologies, automated lane-routing validation framework
- 2020 Bug Bash – SAP Labs, identified critical vulnerabilities across multiple microservices

EDUCATION

Bachelor of Engineering, Computer Engineering
VES Institute of Technology, University of Mumbai | 2012–2016 | CGPI: 8.26

CERTIFICATIONS

- Oracle Certified Professional – Java SE 6.0 Programming
- Spring Core Fundamentals – Pluralsight
- Machine Learning A–Z using Python – Udemy
- Machine Learning – Coursera