

Praveen Thummaluru

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SUMMARY

Backend and distributed systems engineer with 14+ years designing and operating large-scale services in Java on AWS: 9 years at Amazon, 3.5 at PayPal. At PayPal, owned the design of technical reconciliation for Lynx, PayPal's in-house card processing platform, across four upstream teams, and was nominated for promotion to Staff Software Engineer in 2025. Strongest in event-driven pipelines, change data capture, and proving data correctness at scale. Since March 2026, building and operating a production product whose LLM content pipeline runs behind deterministic quality gates.

CORE SKILLS

Languages	Java (primary), Python, SQL
AWS	Lambda, DynamoDB and DynamoDB Streams, Kinesis, Firehose, SQS, SNS, S3, EMR, ECS, EKS, API Gateway, CloudWatch, CDK
Data stores	Redshift, PostgreSQL, Amazon Neptune (graph)
Architecture	Distributed systems, event-driven architecture and CDC, reconciliation and data correctness, REST APIs and microservices, observability, performance, scalability and reliability (PSR)
AI	LLM content pipelines with independent judge models and claim audits, AI-assisted development
Leadership	Cross-team architecture and design reviews, technical standards, mentoring

EXPERIENCE

nextbookinorder.com

Founder and Engineer

Austin, TX · 2026 to Present

- Built and run nextbookinorder.com, a 68,000-page catalogue site, end to end. The batch pipeline streams extraction over a 144 GB compressed dump and a second 62M-record source, loads ~150M staging rows into PostgreSQL, and resolves entities across both sources.
- Built the LLM content pipeline with deterministic filters, a judge model independent of the generator, and a claim audit. Measured where it fails (~18% fabrication on thin sources) and changed the pipeline to skip those sources rather than challenge them.
- Made release quality structural: every class of bug that ships once becomes an unskippable check in the deploy gate, with baselines that can only ratchet tighter.

PayPal

Senior Software Engineer

Austin, TX · Sep 2022 to Mar 2026

Nominated for promotion to Staff Software Engineer, Sep 2025

- Owned design and delivery of technical reconciliation for Self-Processing (Lynx), PayPal's in-house card processing platform: the system that proves every transaction is accounted for through every processing stage. The program was projected to deliver ~\$60M a year in cost savings by reducing third-party processor fees at PayPal's card volume.
- Defined the reconciliation data contracts with four upstream teams across three time zones, with no reporting authority over any of them. Built PoCs, documented the trade-offs, and took the design through enterprise architecture and TechRecon design reviews to consensus.
- Designed a reconciliation system that is both scheduled and event-driven: a scheduled job reconciles each hour on the happy path, and an event-driven path (S3 events, SNS, SQS, watermark publisher Lambda) reruns any reconciled hour that receives late records, so its exceptions clear automatically.
- Built CDC pipelines (DynamoDB Streams, Kinesis, Firehose, Lambda, S3, EMR) with AWS CDK, plus per-stage counts, lag and failure alarms, so a stalled stage was visible before a reconciliation report was wrong.

- Partnered with two Sr. Staff engineers and a Principal Engineer on Lynx architecture. Contributed to the AWS-to-GCP and GCP-to-on-prem integration designs and shaped the GCP-based TechRecon solution.
- Set AWS standards with the Cloud Platform group that were adopted across teams: Lambda CI/CD, resource and deployment conventions, and a proposed unified configuration framework for the Inbound, Outbound and TechRecon workflows.
- Ramped three junior engineers onto AWS and Self-Processing workflows through design walkthroughs and owned slices of the CDC and reconciliation work. Led the 2025 summer internship program.

Amazon

Software Development Engineer II, Fulfillment Technology

Austin, TX · Apr 2021 to Aug 2022

- Designed, built and operated AWS-based REST services that serve warehouse data to internal Amazon teams.
- Enhanced and maintained the safety and compliance services that support warehouse worker operations.

Software Development Engineer II, Prime Video Live Events

Austin, TX · Mar 2020 to Mar 2021

- Built pipelines that ingest sports data (schedules, teams, players, events) from multiple third-party providers, normalized it into one graph model in Amazon Neptune, and served it to Prime Video Live Events teams through REST services.

Software Development Engineer II, Last Mile Technology

Austin, TX · May 2017 to Feb 2020

- Owned the telemetry pipeline and on-device client library for the delivery associate app, and re-architected both as the fleet grew from 70K+ associates to ~1M registered and 600K+ active.
- Migrated live traffic onto the new pipeline by running old and new in parallel, without breaking the dashboards operations depended on: ~1.1 TB/day into a 100+ TB Redshift store.
- Scaled the Redash query layer so analysts and engineers could query the full 100+ TB store.

Software Development Engineer II, Supply Chain Optimization Technologies

Austin, TX · Feb 2016 to May 2017

- Added simulations to the fulfillment insights framework for shipping-cost what-if analysis and removed its bottlenecks, cutting simulation execution time by 85%.

Software Development Engineer I

Seattle, WA · Jun 2013 to Jan 2016

- Led the launch of the Seller Profile page and deprecation of the legacy Seller page, guiding four engineers through scoping, development, testing and launch, and moving the page from Perl/Mason to Java Spring Boot.
- Implemented features across the Amazon.com B2B Offer Listing, Detail and Manage Your Inventory pages.

JDA Software

Technical Consultant

Bangalore, India · Jun 2010 to Jun 2011

- Cut the Dell Retail Channel Management portal's page load from 28 s to 2.5 s by redesigning SQL queries and data flow. Ran PSR testing with LoadRunner and trained 11 engineers on it.

EDUCATION

Arizona State University, M.S., Computer Science (2011 to 2013)

Birla Institute of Technology and Science, M.Sc. (Tech), Information Systems (2006 to 2010)