Gautam Gupta

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Work Experience

Amazon October 2025 - Present
Software Development Engineer Hyderabad

Legacy Service Decoupling
Java, REST APIs, DynamoDB, ElastiCache, Multithreading, A/B Testing

- Designed and led the decoupling of two Java microservices from legacy systems; compared 3 architectures (incl. a DynamoDB read-through cache) and chose a stateless design with no new infrastructure, saving **approximately 10 engineering days**.
- Eliminated an ElastiCache cluster by serving invoice data from a local record instead of a remote call, saving **$60K annually** and removing a failure point from report generation.
- Replaced a legacy service, its fleet, and a **1.1M-record** DynamoDB table with direct REST API calls, unblocking retirement of a service that got **99.8%** of its traffic from us; capped retries with exponential backoff, cutting worst-case downstream calls per request from **50 to 3** and max wait from **60s+ to 5s**.
- Launched behind an A/B feature flag with async, multithreaded shadow testing of old vs. new logic on live traffic: **99.9%+ matching results**, **zero defects**, no rollback; **100% unit-test coverage** (JUnit, Mockito).

Seller Tax-Reporting Platform Migration
Java, Amazon SQS, CloudWatch, Data Validation

- Helped move seller tax reports to a new distributed platform; built parallel runs, automated output comparison, and CloudWatch latency/mismatch metrics that proved parity before cutover.
- Switched report queries to an aggregate-query API, cutting latency **47% (300 ms → 160 ms)**.
- Deleted **35,000+ lines** of dead code and unused SQS queues after the migration, ending recurring alarms (**3+/month → 0**) and cutting the service's AWS cost **50% ($18K/year)**.

Operational Excellence & Release Safety
CI/CD, CloudFormation, Canary Deployments, Agentic AI

- Cut incoming tickets **60%** with the team: deployed an agentic AI agent that answers tickets first (**15%** resolved automatically), wrote **10+ runbooks**, and permanently fixed the top 3 recurring issues.
- Ran on-call independently: documented the root cause of every ticket (5-whys for Sev-2s), kept every ticket under **15 days** old, and resolved **10%** more tickets than the previous rotation.
- Added safety checks to CI/CD pipelines across multiple microservices (integration tests, canary deploys, health checks, CloudFormation alarms with auto-rollback), stopping bad releases early.
- Wrote service guides for AI coding assistants, so the assistant spends **1%** of its context learning the codebase instead of **25%** and can take on bigger tasks.

ValueLabs May 2024 - September 2025
Software Developer Hyderabad

- Built a self-service admin app (Node.js, Express.js, Azure SQL) that let support teams update payment status and client channels themselves, cutting on-call requests **55%**.
- Automated monitoring of NACHA payment runs with Azure Automation and PowerShell, paging on-call via PagerDuty when a payment run failed.

Atlassian May 2023 - July 2023
Application Security Engineer Intern Bengaluru

- Built a Java plugin for Burp Suite Enterprise that adds login tokens (JWT) to requests, so DAST scans could test protected APIs; tuned SAST rules, cutting false positives **60%**.

Skills

Languages: Java, JavaScript, Python, SQL, C++, PowerShell
Backend: Microservices, REST APIs, Node.js, Express.js, JUnit, Mockito
AWS & Cloud: DynamoDB, S3, SQS, ElastiCache, CloudWatch, CloudFormation, IAM, Azure
Release Engineering: CI/CD pipelines, A/B and shadow-traffic rollouts, fault-injection testing, automated rollback
Observability: Grafana, Dynatrace, PagerDuty
Security & AI: DAST, SAST, Burp Suite, JWT; AI coding assistants, agentic AI, context engineering

Education

University of Petroleum and Energy Studies (UPES), Dehradun May 2020 - May 2024
B.Tech in Computer Science and Engineering (Cyber Security) **CGPA: 8.8**