

ABHINAV SINGLA

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Summary

Software Engineer with 3+ years at Cisco building enterprise applications across React frontends, Java/Spring Boot services, and Python APIs. Delivers features from design through production, with expertise in asynchronous processing, SQL optimization, and LLM-powered retrieval. Combines product development with hands-on operational ownership to improve performance and reliability.

Experience

Cisco

Aug 2023 – Present

Software Engineer 2 | Third-Party Software Compliance & Risk Management

Bengaluru, India

- Delivered full stack features across React interfaces and Java/Spring Boot services; contributed to service designs and reviewed pull requests across backend microservices.
- Built and maintained a FastAPI license-search service using BM25, BGE embeddings, Qdrant, and reciprocal rank fusion (RRF); achieved **~3× as many correct license/document matches** as the legacy system.
- Reduced processing time by **~90%** across compliance workflows through RabbitMQ-based asynchronous processing, batched database operations, and SQL query optimization.
- Developed custom RAG infrastructure with PostgreSQL/pgvector, metadata-aware chunking, and reranking; evaluated retrieval quality, answer groundedness, and latency.
- Led cleanup of **~32,000 duplicate components** across **4 controlled phases**, preserving consistency across dependent product releases with **zero downtime or data inconsistencies**.
- Resolve Tier 2 production incidents using AWS, Kubernetes, and Kibana for troubleshooting, alongside service debugging and database corrections; coordinate with business users from triage through resolution.

Cisco

Jan 2023 – Jun 2023

Software Engineer Intern

Bengaluru, India

- Expanded regression tests to cover **over 95% of functional scenarios** by repairing failing suites and adding missing cases.
- Delivered backend features in Java/Spring Boot and frontend changes in React within an Agile development team.

Projects

DeliveryLens | LLM Engineering Insights Agent [🐙 GitHub](#)

Python, PostgreSQL, Ollama

- Built an agent that correlates Jira tickets and GitHub pull requests, detects **7 delivery-risk patterns**, and automates daily, weekly, and sprint reports.
- Integrated local LLM inference for report summaries and stalled-ticket triage, with numeric validation and template fallbacks for invalid or unavailable model responses.
- Implemented PostgreSQL ingestion with upserts and historical snapshots to track review delays, ticket status changes, and pull-request growth over time.

- Built a full-stack platform with **900 assessment questions across 9 topics**, timed tests, persistent progress tracking, and adaptive spaced revision.
- Engineered asynchronous code execution for **Java, C++, and Python** in isolated Podman containers, backed by a PostgreSQL job queue with expiring leases, retries, and hidden-test scoring.
- Implemented passwordless sign-in with OTP throttling and revocable sessions, using Spring Security to protect user-specific progress and assessment data.

Technical Skills

Languages: Java, Python, C++, JavaScript, TypeScript, SQL

Frontend: React, HTML/CSS

Backend & Data: Spring Boot, FastAPI, REST APIs, RabbitMQ, PostgreSQL, JPA/Hibernate

AI & Retrieval: RAG, BM25, embeddings, Qdrant, pgvector, Ollama, LLM evaluation

Cloud & Operations: AWS, Kubernetes, Docker/Podman, Jenkins, Linux, Kibana

Tools & Testing: Git, JUnit, JMeter

Education

Thapar University

Jul 2019 – Jun 2023

B.E. in Electronics and Computer Engineering | CGPA: 8.5/10

Patiala, India

Achievements

- **Cisco Hackathon:** Built an LLM-assisted package source-discovery prototype that increased throughput by **30%**; subsequently integrated the solution into existing services.
- **LeetCode:** **1650+** contest rating; **500+** problems solved.